Every crowd has its silver lining: How crowdsourcing is conceived, practised and how it creates value

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Submitted in total fulfilment of the requirements of the degree of Doctor of Philosophy

May 2015

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Produced on archival quality paper
ABSTRACT

Crowdsourcing is defined as outsourcing work to a large, undefined crowd through an open call. This study examines the nature, practice and value creation potential of crowdsourcing in relation to the strategic management literature. An exploratory qualitative, grounded theory building approach is employed in which data has been collected from eight crowdsourcing firms. The data inventory includes extensive interviews with informants that comprise firm executives matched with firm crowd members, qualitative surveys, site visits, archival and web-based material.

The key theoretical motivation for the study is based on the notion that it is a fresh, contemporary topic; that crowdsourcing as an industry is exponentially growing; and that it is timely in relation to scholarly calls for contribution in this field. More importantly it plugs into the current debate in the strategic management literature calling for an extension of the boundaries of where value is created beyond the resource-based firm. This debate focuses on two new areas of value creation outside the firm: demand-side consumer value creation and systemic value creation represented by new business models. This thesis engages with this important debate by providing grounded data to build on both these new loci of value creation.

The main findings are focussed on crowdsourcing value creation and are divided into two parts. The first part is the key finding which is based on grounded evidence that crowdsourcing is a unique business model. A new focus of the value creation debate includes systemic models represented by the business model. Crowdsourcing is an indisputable system of value creation because the firm cannot exist without its crowd and clients. Thereby it forms a value creation system that can rightfully be named a business model. Findings illustrate how crowdsourcing operates as a business model and extend scholarship through the identification of unique-to-crowdsourcing business model design value drivers which include attraction, engagement, size and scale.

The second part of the findings is a new locus of value creation focuses on consumer as arbiter of value not just the firm. This thesis illustrates that some crowdsourcing firms use their crowds both as a critical firm-centric labour resource and contemporaneously as a consumer of their products. The consumer-based view of value creation is well justified by how value is created by consumer and producer working in concert in crowdsourcing. Yet the thesis also extends notions of upstream firm-centric versus downstream consumer-focussed value creation frameworks - especially because the amorphous crowds operating in both up- and down-stream spheres simultaneously are indistinguishable and not mutually exclusive.
DECLARATION

This is to certify that:

- The thesis comprises only my original work towards the PhD;
- Due acknowledgement has been made in the text to all other material used; and
- The thesis is fewer than 100,000 words in length, exclusive of tables, maps, bibliographies and appendices.

Signed______________________________________________________________

Kathleen Wilson

Date:_______________________________________________________________
PREFACE

Conference Presentations related to the material in the thesis:

3 December 2014

31 October 2014
This paper won ‘Best Management Paper’ Award.

5 December 2013

4 November 2011
ACKNOWLEDGEMENTS

I wish to express my sincere gratitude and appreciation to both of my dedicated and supportive Supervisors, who well and truly went ‘above and beyond’ to ensure my research experience was a very positive one. To Professor Daniel Samson and to Dr Vikram Bhakoo, valuable members of the Department of Management and Marketing, I am extremely thankful and indebted to both of you for extending to me your collective expertise, and your valuable guidance and encouragement. I would also like to acknowledge the fun times and more light-hearted moments we shared which made the experience so much easier and pushed me through the harder times. Thank you for providing the inspiration and for motivating me to continue on throughout this research.

With deepest love, I also thank my husband Mark and my children Jennifer and James for their understanding, encouragement and support throughout this study process. You all ultimately provide me the motivation to strive to achieve challenges such as this thesis.

I take this opportunity to express gratitude to all of the Department faculty members and to all my wonderful peers for their help and support. You have made this experience so much more rich and enjoyable.
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1. INTRODUCTION

1.1 Crowdsourcing: How is it perceived and where is it placed in scholarship?

Crowdsourcing is a term first coined by Jeff Howe (2006a) originally in *Wired* magazine. Shortly after publication, he altered his definition to: “Crowdsourcing is a potentially value-creating phenomenon that is defined as the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call” (Howe, 2006b). Crowdsourcing has been evolving since this definition and also now encompasses nascent and hybrid business forms whereby the firm’s crowd may concurrently fulfil multiple roles including de facto employee, (sub-) contractor, co-creator, decision-making collaborator, idea-generator and even consumer (Boudreau & Lakhani, 2013; Chafkin, 2008).

Crowdsourcing is commonly perceived as a Web 2.0 artefact (Andriole, 2010; Lutz, 2011) whereby Web 2.0 is defined as an online two-way social operating system consisting of networks that surround people, rather than simply present content (Tu, Blocker & Roberts, 2008). While originally positioned in marketing, communications and information management/technology fields, crowdsourcing has been recently found a place in the management and organisation fields (Chanal & Caron-Fasan, 2010). For example, it has been categorised as an innovative organisational business model underpinned often by collective intelligence which feeds crowdsourced participation through open innovation means (Ebner, Leimeister & Krcmar, 2009; Brabham, 2010).

It is also perceived as a type of amorphous mass collaboration of diverse, omnipresent, co-operative individuals/groups; indeed, a positive collective social force which is all made possible by global, connected, high-speed computer networks (Wexler, 2011). Innovation via collaborative, collective intelligence of the crowd is also a highly democratic and egalitarian notion because the individuals of the crowd can be located anywhere, can be ad-hoc, can be gender or ethnically diverse and can have
varying social status, educational attainment, work experience and/or skills (McAfee, 2006).

Afuah and Tucci (2012) delineate two different types of crowdsourcing including tournament-based and collaboration-based. Their view is that tournament-based crowdsourcing is defined as where each crowd member self-selects to work on a problem and only the best solution is ultimately chosen. According to Afuah and Tucci (2012) collaboration-based crowdsourcing happens when individual, self-selected crowd members join up to work together collaboratively on a problem to help solve it or improve it and thereby provide one ‘combined-effort’ solution at the end.

The phenomenon of crowdsourcing is still an emerging research topic (Afuah & Tucci, 2013; Euchner, 2010; Chanal & Caron-Fasan, 2010). In terms of management and organisation studies, crowdsourcing has been explored through behavioural and evolutionary theories of the organisation and conceived as a problem-solving mechanism (Afuah & Tucci, 2012). Alternatively, crowdsourcing has been conceived as a type of business model and seen as an artefact of open or user innovation (Chesbrough, 2011; Chesbrough & Rosenbloom, 2002; Schenk & Guittard, 2009). Crowdsourcing has also been the subject of a definitional analysis based on academic meta-data (Estellés-Arolas & González-Ladrón-de-Guevara, 2012). In addition, there has also been recent scholarly discussion in relation to linking crowdsourcing and value creation/capture and calling for more scholarship in this field (Bloodgood, 2013; Afuah and Tucci, 2013).

This study attempts to bring together all of these above elements related to crowdsourcing and its definition and conception as well as its potential for value creation. This study will attempt to focus on crowdsourcing, using as a starting point its various academic conceptions to provide discovery toward how it is conceived by and indeed practised inside actual crowdsourcing firms. The study will examine existing scholarly definitions and conceptions of crowdsourcing and provide discovery toward its key operational elements and will closely examine its place in open/user innovation frameworks. In order to achieve clarity around the findings and related outcomes, the crowdsourcing firms chosen in the study are purely ‘crowdsourcing-centric’ in terms of
the fact that they fully practice crowdsourcing as their main income and revenue-generator.

In addition, the study will respond to the initial calls for academic scholarship related to crowdsourcing and value creation (Bloodgood, 2013; Afuah & Tucci, 2013). Rather than focusing the study of crowdsourcing and its value creation potential on behavioral and evolutionary theories of the organisation or open/user innovation frameworks, the study will place value creation in a strategic management framing and examine it through both traditional and emerging strategic management theories and frameworks.

More details related to the phenomenon of crowdsourcing, including its critical elements, how it is delineated from other like concepts, where it can go wrong and its evolution through history are all contained in Chapter 2.

1.2 Background and development

In terms of its development, while crowdsourcing is not new, the progress of the Internet has opened many new possibilities for the phenomenon to play out (Afuah & Tucci, 2012). This notion is a basis for establishing that the modern crowdsourcing phenomenon is nascent in view of the fact that the Internet has opened considerable flexibility in its use and added considerably to size and scale potential for organisations using it. However, although influential, Internet companies have struggled to create value and oftentimes viable business models. For example, the dot-com boom/bust of the late 1990s saw Internet-based firms convince investors that traditional revenue/profit models no longer applied but they would soon figure out how to overlay revenue and profit models to the newer eCommerce models. However, such new profit-generating models have been slow to emerge (Teece, 2010).

Even though it is barely a decade since it was first noticed and defined, Internet-based, Web 2.0 crowdsourcing appears to have a great potential for generating new wealth, through the establishment and operation of new businesses. A recent industry report has placed the growth of the crowdsourcing industry in 2011 at 75 per cent, which exponentially increased from 2010 where it grew at 50 per cent (Massolution, 2012). Those businesses which had a relatively early start in substantially using crowdsourcing in their business have realised tremendous growth and have oftentimes
enjoyed a first mover advantage and fostered value creation through innovation (Agafonovas & Alonderiene, 2013). Crowdsourcing is also challenging the rules of competition for established businesses by providing new, highly efficient and cost effective avenues of sourcing skills, work output and ideas. Given the nascence of the phenomenon of crowdsourcing, academic scholarship is understandably sparse and still emerging.

1.3 Motivation

As touched upon earlier, the literature to this point has only just commenced providing a deep articulation of the central issues related to this new phenomenon (Afuah & Tucci, 2012). There has been almost no scholarly empirical research to discover and articulate the central concerns and key features of the emerging phenomenon of crowdsourcing and its relationship to value creation (Bloodgood, 2013). How the phenomenon of crowdsourcing actually operates in crowdsourcing firms is under-researched. There has been little in the way of theory development around how crowdsourcing creates and captures value (Afuah & Tucci, 2013; Bloodgood, 2013).

This grounded research study attempts to provide theoretical discovery and to fill the theoretical gap in knowledge of crowdsourcing as it operates in crowdsourcing-centric firms and how it creates value. It is important in knowledge discovery in this field to uncover the sources of value creation in crowdsourcing, particularly as it relates to the operation of crowdsourcing-centric firms. In keeping with the useful protocol established by Amit and Zott (2001), the terms ‘source of value creation’ and ‘value driver’ appear interchangeably and these terms refer to any factor which enhances the total value created by crowdsourcing business – that value being the sum of all values that can be attracted/extracted from crowdsourcing transactions by key stakeholders.

There is no doubt that practice has led theory when it comes to crowdsourcing. Indeed, there has been much practitioner interest around crowdsourcing since the term ‘crowdsourcing’ – perceived by some practitioners as a shortened version of ‘outsourcing to a crowd’(Miettinen, 2012) - was first coined in its modern Web 2.0 guise.
After the Howe (2006a) article, an industry website devoted to the crowdsourcing industry *Crowdsourcing.org* started to attempt to categorise the crowdsourcing industry as early as 2008 – only two years after the official coining of the term ‘crowdsourcing’. Early efforts included crowdsourcing categories of: innovation, social, crowdfunding, creative, platform and tools, engagement, prediction and knowledge (Esposti, 2011).

By March 2011 this list was altered by the input of ‘crowdsourcing industry experts’ to include open innovation, cloud labour, collective knowledge, community building, crowdfunding, collective creativity and civic engagement. Less than eight months later the crowdsourcing industry was divided into six categories of crowdsourcing including crowdfunding, crowd creativity, tools, distributed knowledge, cloud labour and open innovation (Esposti, 2011).

However, some commentators criticised these early attempts at categorising the crowdsourcing industry as being complicated and confusing, such as Roth (2011), who states: “So why is it so difficult to classify the actors who leverage crowdsourcing? Because none of them does the same thing!”

Industry stakeholder attempts at categorising the crowdsourcing industry on behalf of practitioners is still very much in development. For example, Dawson and Bynghall (2012) recently created an alternative group of industry crowdsourcing categories including marketplaces, platforms, non-profits, media and content, crowd services and content and product market. Their categorisation, similar to *Crowdsourcing.org*’s attempts (Esposti, 2011) was based on crowdsourcing practitioner firms.

More recently, Shingles and Trichel (2014) in a Deloitte-sponsored 2014 trend predictions industry paper take a more reductive approach and simplify crowdsourcing into four simple categories: firstly, simple, task-oriented crowdsourcing; secondly, complex and experience-based crowdsourcing; thirdly, open-ended idea-generating; and, fourthly, funding, consumption and contribution crowdsourcing.
1.4 Justification for the study

1.4.1 Just another business fad?

Crowdsourcing may be seen by some as a passing fad or just another business phenomenon which might or might not create long-term value. But is it a passing fad? How exactly is value created? Is crowdsourcing here to stay? These questions are important and have been discussed in the popular press and practitioner-focussed journals and are just starting to emerge in serious academic debate (Afuah & Tucci, 2013; Bloodgood, 2013).

McKinsey and Company published an article in 2010 on the importance of crowdsourcing and its potential. In relation to its future importance it stated:

> The large, hierarchical corporations that dominated business in the 20th century will not completely disappear in the 21st century, but they will become less important. In their place will be new, more flexible ways of organizing large-scale work that provide great freedom and take advantage of people’s energy and creativity. All of them will depend on the Internet... As a result, we can now have the economic benefits of very large-scale organizations without giving up the human benefits of small ones—freedom, flexibility, motivation, and creativity. These human benefits often provide decisive competitive advantages in knowledge-based and innovation-driven work, so we should expect to see them in more and more parts of our economy over the coming decades. (Malone, Laubacher & Dellarocas, 2010, p. 1)

To strengthen the case against crowdsourcing being just another fad, details are presented below highlighting the size and scale of the crowdsourcing industry, as well as the ways in which practice has led theory in terms of the crowdsourcing phenomenon.

1.4.2 Size and Scale of crowdsourcing industry

Crowdsourcing.org (2011) published the names of around 230 crowdsourcing-centric companies in operation at 2011, which it considered to be mainstay organisations of the crowdsourcing industry. Interestingly, a recent check of the crowdsourcing firm directory published at Crowdsourcing.org (2014) showed the number of firms had increased more than ten-fold from their 2011 estimation to currently place at 2,779. It is worth bearing in mind that this ten-fold increase has taken place in a period of less than three years.
A recent crowdsourcing industry report (Massolution, 2012) presented findings that supply is growing significantly faster than demand in terms of crowd labour with labour bases growing over 100% per annum. The paper’s other findings indicate that a typical crowdsourcing firm derives more than 70% of its capital needs from the cash generated from day-to-day operations. Half of all crowdsourcing firms reported that 100% of their capital is provided by ongoing operations. The paper reported that the crowdsourcing industry grew at between 50 to 75 per cent over two years. Another interesting finding is that large enterprises with revenues above $1 billion appear to be early adopters of crowdsourcing.

In terms of the crowd, the industry report by Massolution (2012) presents that 60 per cent of crowd workers reside in ‘buyer’ geographies such as North America and Europe, the other 40 per cent residing in the Asia Pacific and South America regions. The largest numbers of crowd workers operate in software services, micro-tasking, expertise-based tasking, ideation and freelance style work.

Some recent figures presented about size and scale pertaining to the crowdsourcing industry include that the paid crowdsourcing labour pool contains over one million workers who have earned $1-2 billion in the last decade, and crowdsourcing vendors, who typically charge a fee or commission, make over $500 million annually (Felstiner, 2010). Crowdsourcing employs over two million knowledge workers, contributing over half a billion dollars to the digital economy (Vukovic & Bartolini, 2010). However, even these fairly recent figures now seem out of date.

It is clear that the crowdsourcing industry’s size and scale is growing rapidly. Individual crowdsourcing firms, for example in 2014, claim to have enormous crowd workforces of well over the two million (for the industry) estimated by Vukovic and Bartolini in 2010. For example, Freelancer, an online crowdsourcing firm specialising in micro-tasking, expertise-based tasking and freelance-style work, has a current global workforce of 15.3 million crowd workers (Freelancer, 2014). CrowdFlower (2014), another crowdsourcing firm specialising in crowd-based micro-tasking boasts multiple millions of crowd workers and claims on its Internet home-page: “The world is at work. Right now. Contributors from 208 countries and territories have completed more than 1.3 billion judgments for CrowdFlower customers.” Both of these companies are
astoundingly less than seven years old and have already established huge global operational size and scale. This achievement of huge crowd attraction is even more outstanding, when compared to the world’s largest people-employing multinational, named as Wal-Mart Stores Inc, which employs a ‘mere’ 2.2 million people in total (Hess & Serenbetz, 2014).

1.4.3 Practice leads theory

As mentioned earlier, the practice of crowdsourcing and practitioner writing has led theory and serious theoretical debate. It has become an emerging topic of interest in well-respected practitioner focussed journals such as *Harvard Business Review* (Boudreau & Lakhani, 2013), *California Management Review* (Stieger, Matzler, Chatterjee & Ladstaetter-Fussenegger, 2012) and *McKinsey Quarterly* (Gast & Zanini, 2012). This is complemented with private business research and management consulting organisations, for example, both *Accenture* and *Deloitte* have produced trend papers outlining that crowdsourcing is a key trend for 2014 (Accenture, 2014; Shingles & Trichel, 2014).

The Accenture (2014) paper ties three elements into its explanation of why crowdsourcing, even though still an evolving phenomenon, is so worthy of being considered a key business trend for 2014. Accenture’s (2014) view is that all businesses have an accelerated pace of information technology change. This heightened information technology pace places increasing pressure on businesses to deploy new technology to ease the most pressing ‘pain points’ such as market insight, innovation and a requirement for (often short-term) specialised skills. Crowdsourcing is seen as a key phenomenon to help efficiently solve these ‘pain points’. Another key reason they present crowdsourcing as being a key trend in 2014 is that crowdsourcing platforms have sufficiently matured to the point where crowd communities (and concomitant businesses in many cases) have formed around “almost every product, service and idea that can be imagined” (Accenture, p.30). In addition they see some of industry’s biggest market disruptors currently using crowdsourcing to solve many problems and other rival businesses taking notice.

Analysts at Deloitte (Shingles & Trichel, 2014) see crowdsourcing as a key trend in 2014 based on the notion that the crowd can provide specialised skills which are able to
be dynamically sourced from anyone, anywhere and only as required. Their view is that
crowdsourcing is a key new enabler for firms to tap talent and experience from outside
firm boundaries. Companies are increasingly spoiled for choice in terms of skills which
can be sourced from the crowd. These skills are as diverse as data entry to advanced
analytics and product development. Deloitte (Shingles & Trichel, 2014, p. 31) urges
firms to simply go ahead and experiment with crowdsourcing because the “disruptive
impact on cost alone likely makes early experimentation worthwhile”.

From a theoretical perspective, the birth of crowdsourcing in its evolving, modern
Web 2.0 form is now at a point where a strategic literature response to what type of
business phenomenon it is - whether business model or business strategy or firm activity
or firm routine - is required.

Scholars, in particular those scholars who have recently commented on theoretical
utility, have been calling for theory creation from “the observation of real-life
phenomena” (Hambrick, 2005, p. 124). Corley and Gioia (2011) posit that the practical
utility of theoretical contribution in modern scholarship most often receives mere ‘lip
service’ and should be much more central to the practises of modern serious
scholarship. Their view is that “theory directed at practical importance would focus on
prescriptions for structuring and organising around a phenomenon and less on how
science can further delineate or understand the phenomenon” (Corely & Gioia, 2011, p.
18).

The arrival of a serious scholarly article centred on crowdsourcing, namely,
‘Crowdsourcing as a solution to distant search’ by Allan Afuah and Christopher Tucci
in the *Academy of Management Review* in 2012 was a watershed moment for the new
phenomenon of crowdsourcing. The phenomenon of crowdsourcing, incredibly less
than a decade old, has now been received as a topic of importance in scholarly debate.
Afuah and Tucci (2012, p. 356) commence the beginnings of serious academic
discussion around the phenomenon of crowdsourcing posing some questions:

*When might crowdsourcing be a better mechanism for solving problems than the
alternatives of either solving them internally or designating an exclusive
contractor to solve them? What type of organization is likely to successfully
pursue crowdsourcing? What types of internal and external environments are*
conducive to crowdsourcing? If a firm decides to crowdsource a problem, how should it go about it?

In further commentary about crowdsourcing in a later Dialogue featured in the Academy of Management Review Afuah and Tucci (2013, p.459) go on to expound on one of the most critical questions in terms of the phenomenon of crowdsourcing:

*Our exploration of the question was rooted in two key drivers of value capture – the value created and the cost. However more comprehensive theorizing that focuses on value capture...would be very useful. Additionally many other questions that we raised in our article have not yet been explored. There is plenty of room to add value to this very timely subject.*

This response from Afuah and Tucci (2013) came in the light of a preceding Dialogue entry from James Bloodgood (2013). Bloodgood (2013, p.455) criticised Afuah and Tucci’s 2012 article on crowdsourcing for missing the important notion of value capture and warns that missing this may cause future crowdsourcing researchers to walk down a “path that is inefficient, ineffective, and potentially detrimental”. Bloodgood (2013) posits that Afuah and Tucci do not address value capture from the position of competitive advantage for the focal firm.

So it is that the subject of value capture/creation and its relationship to crowdsourcing has indeed become the subject of intense scholarly scrutiny. Afuah and Tucci (2013), along with Bloodgood (2013) have put out a call for serious scholarship in this important area and timely subject in the prestigious management journal, the Academy of Management Review. This study has been conceived, researched and analysed in direct response to these calls for serious scholarship and in response to the present dearth of academic scholarship in the field of crowdsourcing.

1.5 Research objectives

The underlying research objective of this study is to understand the phenomenon of crowdsourcing as it is practised in real-life crowdsourcing firms which have large crowd workforces. The crowds must be large enough to fit well with Howe’s (2006b) original definition relating to a ‘large’ network of people which constitutes a crowd. Whilst the notion of large has not been elaborated upon by the original definition, a crowd of 100,000 people and above is used in this study in relation to the use of the term ‘large’.
Sirmon, Hitt and Ireland (2007) posit that there is minimal theory to explain exactly how firms transform resources to create value and that a firm’s external environment on managing resources needs to be examined to help solve this problem. So it is then, that a field-based study can potentially provide an understanding of the various viewpoints of and the dynamic between the external crowd and the internal firm executives. The study will seek to provide data which will help explore how value is created. Therefore, using a theory building approach utilising case studies of crowdsourcing firms, the study seeks to clarify, articulate and extend theory on sources of value of crowdsourcing.

Consistent with the definitional precepts established by Amit and Zott (2001, p. 494) relating to value creation; in this study the term ‘value’ is “the sum of all values that can be appropriated by the participants in e-business [crowdsourcing] transactions” and the terms ‘value creation sources’ and ‘value drivers’ are inter-changeable terms in the study and refer to “any factor that enhances the total value created by an e-business [crowdsourcing]”.

The scope of the study incorporates important systemic elements from stakeholder angles in the whole crowdsourcing cycle. This means that various stakeholders in the system are accounted for, beyond simply the firm viewpoint. This systemic approach, however, operates in this study with the exception of the client perspective, which was not included for a number of reasons elaborated later in this chapter in the ‘Limitations’ section.

The following research questions have been developed as an overarching guide for this thesis. These are based on the calls for crowdsourcing scholarship into crowdsourcing and value creation and based on scholarly and research material developed in the prequel and literature review stages conducted later in the study:

RQ1: How is crowdsourcing practised and conceptually characterised in terms of essential features in crowdsourcing-centric firms?

RQ2: How does crowdsourcing create value for the key participants in crowdsourcing transactions?
1.6 Theoretical underpinnings of the research

The major theoretical perspectives concerning value creation in the strategic management literature tradition include a core and mainstream collection, which form a canon of sorts. These major value creation theories include: Schumpeterian innovation (Schumpeter, 1943), transaction cost economics and economic exchange efficiencies (Williamson, 1985), the resource-based view of the firm and the picking of resources which are valuable, rare, inimitable and non-substitutable (VRIN) (Barney, 1991) and/or the exploitation of specific firm resources and competences which can change dynamically (Teece & Pisano, 1994). In addition other major strategic management theoretical lenses to value creation include value chain analysis (Porter, 1985), strategic network theory and network effects among firms (Gulati, Nohria & Zaheer, 2000).

In the established spirit of this broad, inclusive and generalist approach, this thesis will embrace and critically examine these mainstream value creation theories in the strategic management literature tradition. This approach has a precedent and was adopted by Amit and Zott (2001) in relation to eBusiness and value creation, whereby they utilised the whole value creation ‘canon’ of literature in strategic management as a theoretical lens. However, obviously, the phenomenon of crowdsourcing rather than e-business will be the focus in this study. In addition, newer systemic value creation theories encompassing the business model and downstream (consumer) demand-side in tandem with upstream firm-based value creation models (Priem, 2007; Priem, Butler & Li, 2013; Zott, Amit & Massa, 2011) will be utilised.

1.6.1 Application of the theoretical lenses of value creation to crowdsourcing

Afuah (2013) proposes that, traditionally, a firm establishes competitive advantage by creating superior value than its competitors and creates this value through the benefits it offers customers outweighing those associated costs. At this point crowdsourcing appears to be showing some early promise of more sustainable value creation (Carroll, 2011).

As the academic debate mentioned above outlines, value creation is a central concern in strategic management scholarship. As so eloquently stated by Amit and Zott (2001,
p. 509): “We believe that value creation strikes at the heart of the strategic management and entrepreneurship fields, as it is an essential prerequisite for value appropriation.”

It is interesting to note that German scholars Reichwald and Piller (2006), at a similar time to Howe (2006a) - the widely acknowledged originator of the term ‘crowdsourcing’- were making early attempts at framing a definition for the new phenomenon of crowdsourcing. Their definition of crowdsourcing as ‘Interaktive Wertschopfung’ (interactive value creation) was clearly more mindful of value creation from the outset. Despite the close link to value creation in its construction, however, Kleeman and Voss (2008) make a strong case that Reichwald and Piller’s (2006) original definition of ‘Interaktive Wertschopfung’ in actual fact very closely mimicked that of Howe’s (2006a) original definition. Both Howe’s (2006a) definition in tandem with Reichwald and Piller’s (2006) definition run similarly as “the act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, usually large group of people in the form of an open call” (Kleeman & Voss, 2008, p. 9).

In keeping with the spirit of Reichwald and Piller’s (2006) moniker of ‘interactive value creation’ in relation to their definition of crowdsourcing, strategic management scholars have been recently engaged in discussions concerning expanding traditional research boundaries pertaining to resource value and value creation beyond and outside the firm (Priem, Butler & Li, 2013). The value creation approach focussing primarily inside the firm is most notably covered by the resource-based view (RBV) (Barney, 1991). The RBV places focus and emphasis on a firm’s competitive advantage and therefore on value appropriation (Amit & Zott, 2001). This RBV in-firm, ‘upstream’ approach is supplemented with the ‘downstream’ consumer demand-side approach (Priem, Li & Carr, 2012), integrative ‘upstream’ and ‘downstream’ value system models (Schmidt & Keil, 2013) as well as expansive emerging approaches encompassing business ecosystems and business models (Zott, Amit & Massa, 2011). The focus of this study will be on total value creation not simply on value creation relating narrowly to that laying the path for the competitive advantage of the firm.

This recent focus on value creation from ‘downstream’ consumers and emanating from ‘systemic’ holistic approaches encompassing the whole ‘system’ of value creation,
most notably the business model, has allowed for emerging opportunities for strategic management scholars to break away from so-called “‘normal’ strategy research” (Priem, Butler & Li, 2013, p.471). Fundamentally, breaking from such ‘normal’ strategy research presents scholars with compelling opportunities to examine new phenomena in innovative ways.

The recent boundary-expanding views of value creation in the strategic management field also focus on ‘downstream’ consumer demand-side value creation perspectives (Priem, Butler & Li, 2013). Such ‘consumer perspective’ on value creation sees the creation of value for end users as facilitating and expanding the ‘size of the pie’ value creation for firms rather than zero-sum value capture among rivals. In addition to the consumer perspective (and complementary to it) are ‘holistic’ frameworks, incorporating the whole system of value creation (not just the producer or consumer). This holistic framework includes the business model which incorporates a value creation potential even broader than consumer and/or producer value creation frameworks. The business model in particular provides a whole-of-system style of value creation which takes account of other important stakeholders (beyond producer/consumer) such as suppliers to provide a value creation alternative framework (Priem, Butler & Li, 2013).

Crowdsourcing as a phenomenon is confounding to traditional resource value creation perspectives because it suggests great fluidity of demand and supply elements, muddling at times the notion of specificity of ‘upstream’ and ‘downstream’ value creation elements in relation to the firm. Indeed a crowd can function as a major supplier and a major consumer within the same company in a simultaneous manner. In addition crowdsourcing’s crowd may rightly be seen as a firm resource, however, the ephemeral, fleeting nature of such a crowd, which must be attracted somehow and naturally ebbs and flows and may even quickly disappear, make it difficult to conceptualise it as a traditional value creation resource.

These newer and more traditional viewpoints of value creation in the strategic management field and how they relate to crowdsourcing are elaborated upon further in the second part of the literature review chapter.
1.7 Research Methodology

This thesis is a qualitative, inductive, exploratory study which utilises a multiple case study approach due to the embryonic stage of crowdsourcing as an entity in its Web 2.0 form. The aim of the study is to develop grounded theory (Glaser & Strauss, 1967; Strauss & Corbin, 1998). In addition, the study aims to provide wide and deep descriptions and contextual detail of the phenomenon of crowdsourcing as it is practiced in crowdsourcing-centric firms (Eisenhardt, 1989; Eisenhardt & Graebner, 2007). The study is based on the assumption that case study informants are knowledgeable agents, ‘real life’ experts as it were, who are capable of explaining their thoughts, actions and intentions (Gioia, Corley & Hamilton, 2012). The study is in keeping with the view posited by Stake (2006) as well as Eisenhardt and Graebner (2007), that case studies provide a sound basis for the investigation of emerging phenomenon - like crowdsourcing. In addition they both posit that case studies help generate a more holistic view of the phenomenon of interest and are thereby useful for helping to generate new theoretical insights. One of the chief goals of this research is to reach for theoretical insights about the evolving phenomenon of crowdsourcing and to potentially build or extend theory related to how crowdsourcing creates value.

Even though the interview and survey questions used in the case studies are based on a loose a priori theoretical starting point, in keeping with the grounded approach, I have tried to minimise the imposition of prior theories, constructs or frameworks as an a priori explanation of informant’s qualitative data (Eisenhardt & Graebner, 2007; Gioia et al., 2012).

A schematic summary of the design of the study is provided in Figure 1.1. An initial impression-forming, prequel analysis was conducted using Internet-based trend analysis from Google Trends as well as data from both public and scholarly sources related to the term ‘crowdsourcing’. This helped to determine in a very general way how crowdsourcing was trending from the public’s viewpoint and how it was defined, conceived and viewed by self-selected members of the public, alongside scholars, and how those wishing to understand crowdsourcing prima facie might perceive it.
The next stage included a literature review, which helped to solidify the development of the two research questions including, firstly, how crowdsourcing is practised and conceptually characterised in terms of essential features; and secondly, how crowdsourcing creates value for its key stakeholders. As a result, interview questions were developed and qualitative survey questions were adapted out of and closely mimicked the interview questions. Qualitative survey questions simply asked the informant to write answers in free-form and closely resembled the same questions being asked of interview informants. Case studies then took place in eight firms with a total of 55 informants (including those who completed written survey content). These 55 informants included 24 firm owner/ founder/ executive informants and 21 crowd interview informants and 10 written survey crowd informants.

Two distinct interview groups of both the firm executives and corresponding crowd were chosen because the data would be richer and also the differing perspectives would help provide a better basis for the resulting grounded theoretical development. The decision to interview the crowd in crowdsourcing was deemed to be useful in providing insights around value creation and seemed important for a well-rounded view to help determine exactly how crowdsourcing is conceived and practised.

The study, aside from interviews, also used data sources including site visits and observations, document analysis and image analysis. Due to the relative nascence of crowdsourcing and also to the fact that it is primarily an online phenomenon, an initial impression-forming exercise was undertaken using Google Trends (2011) and publicly-sourced images analysis and a preliminary literature review of the term ‘crowdsourcing’.
1.8 Contributions of the research

The major theoretical contribution of this thesis is that it attempts to provide discovery of the key elements which make up the phenomenon of crowdsourcing as it
relates to modern, real-life, operating crowdsourcing firms. The study provides empirical evidence in relation to the discovery of the key value drivers of crowdsourcing in relation to all major stakeholders. Those value drivers are summarised as innovation, efficiency, attraction and engagement, as well as size and scale. The study also contributes to a general understanding of major value creation theories. It does so by examining closely how each established theory can be applied and even extended as it relates to a modern Web 2.0, Internet-based setting characterised by the modern practice of crowdsourcing. The study contributes to major value creation theories by suggesting each one on its own fails to fully capture the entire value creation potential of crowdsourcing. It also does so by suggesting a more fluid model related to demand-side, consumer-focussed value creation; where elements of demand and supply work to freely co-mingle simultaneously both up- and down-stream in a business production cycle.

Crowdsourcing was identified in both early literature and in the study by around half the firm executive informants as a business model. The study also supports the notion that crowdsourcing is a unique type of business model with some of its own unique value drivers.

The study also points to the unusual form of firm resource that the crowd in crowdsourcing represents. It is a resource that is clearly identified as a resource by crowdsourcing firm executives yet is an amorphous, remote and often anonymous mass of people. The crowd is at most times not formally contracted, trained, or mostly paid by the firm, yet is still a critical resource, upon which crowdsourcing-centric firms rely for their very existence.

The study generates several practitioner contributions due in part to the fact that the study is based on the real-life workings of successful firms using crowdsourcing-based business models. Managers can reap value whereby an understanding of the key differentiating value drivers attached to the crowdsourcing business model may help contribute concrete business knowledge in terms of how successful crowdsourcing firms drive business success. Knowledge in this realm is useful to any manager wanting to implement a crowdsourcing business model or simply a crowdsourcing project within an existing firm. A further practitioner contribution is that the study provides insights to
crowdsourcing firm operations and characteristics. Finally, another practitioner contribution is the notion established in the study that crowdsourcing represents a new mode of workplace organisation which human resource managers should be prepared for at both a practical and strategic policy level.

1.9 Assumptions and Limitations of the study

1.9.1 Assumptions

It is assumed that all interviewees for the study understood the intent of the study, the tenure of the questions asked and were sincere and accurate in the responses they imparted at interview. Where it was clear that an informant had English as a second language, questions were simplified but not excluded – so as to achieve consistency across all interviewees.

It is presumed that as part of the grounded assumption for the study that the informants who are intimately involved in real-life and actual crowdsourcing practices from day-to-day are the best source of information and thereby key expert informants concerning this new phenomenon of crowdsourcing (Gioia et al., 2012). This allows for confidence that the data extracted can be used as an accurate basis on which to establish how exactly crowdsourcing is conceived and practised in firms and how it creates value. The firms interviewed are well-established and running with large crowds so it is assumed that the views of those interviewed can widely reflect those found in the wider crowdsourcing industry.

1.9.2 Limitations

The study is limited to a particular once-only time period, and does not attempt to replicate the study over a longitudinal period. Replicating the interviews in a longitudinal manner would increase the reliability of the results.

The attribution of any raw quotes to extant theory and development of conceptual frameworks in this study have relied on the researcher’s interpretation.

The study is limited to crowdsourcing-centric firms, which means the firms are using crowdsourcing as the major means by which revenue is raised and the very existence of the firm is reliant upon crowdsourcing. Therefore, caution should be exercised in
assigning generalisability of results to mainstream firms which use crowdsourcing in a non-existential manner, as a mere side activity or business routine.

The fact that the crowdsourcing firms are all successful and thriving in the study may raise difficulties associated with survivor bias. As Mitchell (1991, p. 5) states: “Excluding early entrants that quickly exited, often because they performed poorly, will cause an upward bias in the measured link between performance and early entry.” The bias in the study toward only successful start-up firms was felt necessary in order to truly examine how crowdsourcing is practised when it works well and successfully. In crowdsourcing firms which are poor-performing or have not survived, it was deemed difficult to isolate the elements of crowdsourcing which were important and critical to successful operation and hence to the central area of concern, that being value creation.

For the most part the phenomenon of crowdsourcing as practised in a modern Internet, Web 2.0 context is barely a decade old. This means the maturity of the phenomenon is low. Observations over a longer time period would allow for higher levels of maturity of the phenomenon and perhaps alter the manner in which it is practised and how the crowd is engaged.

Another limitation is that, while both the crowd and the firm perspectives are accounted for, the client perspective has not been formally included. The reason for the missing client perspective includes that firstly, most crowdsourcing firms were not able to provide contact details of their clients due to privacy provisions. In addition, many clients had apparently never communicated directly (face-to-face) with the firm because they were self-selected and proceeded to transact with the company through the firm’s highly-automated online medium, which required little more direct exchange than requisite monetary-related transactional information. The third issue was that, while the crowd and the firm are clearly highly aware of and therefore opinionated about the crowdsourcing firm because their living might well rely upon it, many clients may have only reasonably fleeting transactions with crowdsourcing (due to its inherent efficiency) and may, in fact, have trouble recalling fine details about it.

Despite this, a more thorough study might include data elicited from the crowdsourcing client, where such data can be lawfully obtained. The client is perceived
by the study as a key stakeholder in the crowdsourcing system/business model. So the view of the client is gained second-hand or hearsay via the executive and crowd informants.

1.10 Summary of Chapter 1

This chapter has provided a background to the study and has justified researching crowdsourcing based on reasons such as increasing size, scope and wealth generation of the crowdsourcing industry; the growing tendency that crowdsourcing is trending up in terms of public interest and attention; and, that it is seen as a key business trend by well-respected industry researchers. It is also justified by the fact that the crowdsourcing domain is considerably under-researched.

In terms of scholarship, this chapter touches on the main value creation theories which are favoured in the strategic management field along with the theoretical underpinnings of the thesis.

The chapter presents the research objective and clearly has listed the overarching research questions for this thesis. Furthermore, this chapter has highlighted that this study is qualitative in nature and has been designed in two phases encompassing a prequel, impression-forming stage and a multiple case study stage. Overall, eight firm-based case studies have been conducted with both crowdsourcing firms’ executives and matching crowds involving 45 interviews and 10 qualitative surveys. The data has been analysed inductively and techniques such as open, in-vivo and axial coding to facilitate a thematic data structure have facilitated the analysis.

This study contributes to the literature by building on established value creation theories and business model frameworks by providing concepts from the grounded data to provide discovery against these theories and frameworks.

Finally, assumptions and limitations of the study are recognised in order to manage this project more effectively.
The next chapter provides fine-grained details and conceptual delineation relating to the actual phenomenon of crowdsourcing. It also examines perceived problems with crowdsourcing and examines its nascence and its historical development and evolution.
2. CROWDSOURCING: BACKGROUND & INDUSTRY CONCEPTIONS

2.1 Introduction to crowdsourcing

Crowdsourcing, as a modern phenomenon, and in its modern guise as being less than a decade old, requires a degree of explanation and exploration which more mature topics would not ordinarily require. This chapter serves to explore in finer detail the phenomenon of crowdsourcing. This is to facilitate better background underpinning of the research questions - particularly the research question pertaining to how crowdsourcing is practised and conceptually characterised in terms of essential features in modern, real-life contexts. Crowdsourcing, being an emergent topic, requires some delineation from related concepts and from concepts for which it is mistakenly substituted or for which it is labelled erroneously as a sub-set. Crowdsourcing is also commonly conceived as a phenomenon with a set of difficult problem attributes. Such problem attributes require exploration and explanation to foster a perceived even-handedness relating to the topic.

2.2 Crowdsourcing: Contextualisation and concept delineation

As mentioned earlier, crowdsourcing was a term coined by Howe in 2006 and was defined by him as an organisation outsourcing a function once performed by employees to an undefined and usually large network of people via an open call for proposals (Howe, 2006b). At its core, crowdsourcing enlists a group of humans to help problem-solve on a wide variety of tasks, however, this idea can also be known variously as peer-/co-production, user-/collaborative-/community-/social-systems, wikinomics and crowd wisdom (Doan, Ramakrishnan & Helevy, 2011). Collective intelligence, while mostly studied in scientific disciplines such as biology or genealogy, is a social mechanism which may, in some circumstances, underpin crowdsourcing. It is defined as individuals within a group doing things collectively that seem intelligent (Malone, 2006). The relationship between collective intelligence linked to crowdsourcing and operational management has only very recently been explored (Gloor & Cooper, 2007; Malone, Laubacher & Dellarocas, 2010). Until relatively recently, ‘the crowd’ was
considered in the Sociology discipline to be problematic, often threatening or sometimes irrational. Recently, however, this discipline has re-cast the crowd more positively as wise, rational, benevolent and investing in social capital. The crowd is seen as less problem-causing than problem-solving in line with crowdsourced problem-solver communities’ core notion that the crowd is wise, rational, benevolent and useful (Gloor & Cooper, 2007; Wexler, 2011).

Crowdsourcing is related and similar to some complementary and supplementary concepts. Therefore, it may also be useful to compare and contrast crowdsourcing with similar concepts to delineate it further. Crowdsourcing, for example, is related to outsourcing and offshoring. Offshoring is defined as the process of sourcing a business task, process, or function which supports local and international operations from remote operations based abroad, particularly those from lower cost developing/emerging economies (Manning, Massini & Lewin, 2008). Outsourcing is defined as: "the reliance on external sources for manufacturing components and other value-adding activities" (Lei & Hitt, 1995, p. 836).

Similar to outsourcing and offshoring, crowdsourcing operates to dis-intermediate business processes while making extensive use of information technology to provide administrative and back-office support functions which may supplement or even displace existing directly-employed staff (Manning, Massini & Lewin, 2008). However, crowdsourcing uses a large, remote and amorphous crowd which is enlisted via an open call (Howe, 2006b). This is quite different to the situation of both offshoring and outsourcing wherein the labour supplier is a known quantity and works to specified time periods via defined contractual arrangements.

Building on this point, the simplified notion that crowdsourcing as a neologism is the act of ‘outsourcing to a crowd’ (Miettinen, 2012) requires some further elucidation. A recent industry trend paper by Deloitte (Shingles & Trichel, 2014) takes pains to separate and differentiate crowdsourcing from mainstream outsourcing. Its view is that crowdsourcing providers work to leverage platforms that match clients/buyers/consumers to a much broader base of sellers/workers/producers than traditional outsourcing does. At the same time crowdsourcing reduces many of the administrative overheads which plague outsourcing while at the same time creating new marketplaces.
by using and/or combining a multiplicity of platforms such as cloud, mobile, social and web technologies. The benefits and advantages of crowdsourcing over traditional outsourcing are spelled out by Deloitte (Shingles & Trichel, 2014, p.32-33):

For temp agencies or outsourcers, the talent pool is constrained by their rosters. In crowdsourcing, the needle in the haystack comes to you, with skills and interests aligned to your ask. Buyers can access large pools of people in short order, typically at low transaction cost. For free agents (the crowd) these assignments allow them to earn extra money with fewer commitments and more flexibility than traditional employment offers.

In terms of other similar concepts, crowdsourcing is frequently confused with crowdfunding. Crowdsourcing may be usefully delineated from crowdfunding through the primary use of the crowd, with it being the source of labour in crowdsourcing and the source of monetary funds provision in crowdfunding (Shingles & Trichel, 2014).

In addition another point of confusion is that crowdsourcing may sometimes be, but is not limited to, open or user innovation frameworks (Schenk & Guittard, 2009). Crowdsourcing is not open source because open source’s ‘openness’ works so that nothing is proprietary and much crowdsourcing output is, in fact, proprietary (Afuah & Tucci, 2013). Although it may operate as such, crowdsourcing is not limited to being a simple routine or an additional resource or capability inside a business – it can actually be considered a ‘liquid’ workforce for firms (Accenture, 2014) and crowdsourcing pierces into and out of each crowdsourcing firm’s boundaries, due to its highly ephemeral quality.

In terms of further delineation, crowdsourcing is not a straightforward data collection tool. Fink, Damoulas, Bruns, La Sorte and Hochachka (2014) see crowdsourcing as a great addition to scientific research data collection options by being an efficient way to gather data quickly across the world, albeit that data may be biased due to the opportunistic way it is collected or may be irregularly distributed.

Crowdsourcing is also more than a simple economic exchange because such a simple transactional view ignores firm-specific factors which may for example be used to solve problems - being those of firm knowledge, capabilities or absorptive capacities (Afuah & Tucci, 2012).
Crowdsourcing *per se* is more than a new recruitment method or a way of getting work done or of gaining knowledge – it can be used in a variety of manners to source talent in unusual places and as a way firms may gain outside-boundary access to different perspectives and heuristics - which can prove to be extremely valuable (Jeppersen & Lakhani, 2010).

Crowdsourcing is more than just another artefact of technological carriage of information across networks and is more than a simple outworking of global Web 2.0 network capabilities (Accenture, 2014). Crowdsourcing is not simply restricted to the ‘hard-nosed’ world of business, it has also been used, for example, to create works of art (Koblin, 2006).

The rather complex uses of and labels put upon crowdsourcing, and indeed the restrictions and riders on what it is not, speaks to the fact that scholars and practitioners are still grappling to work out what crowdsourcing is and how to appropriately label and describe it. There is still no unified consensus of a complete contemporary understanding of crowdsourcing and how exactly it is defined (Simula, Tollinen & Karjaluoto, 2013).

Chesbrough (2011, p. xix) gives a useful and practical description of crowdsourcing, wherein he tries to capture the essence of what it is about:

> Done right, it [crowdsourcing] taps into the knowledge, the creativity, the insight and skill of the world around you. It can help you predict next month’s sales, or next season’s fashions. It can improve the management of your supply chain. It can enhance your customer’s experience of your products and services. It even outperforms the polls in predicting the winners of Presidential elections. And often these improved outcomes can be created with surprisingly modest investments...crowdsourcing is not a panacea for all ills and can lead to terrible results if not managed properly.

Chesbrough (2011) further highlights that crowdsourcing is associated with firm management opportunities along the positive lines of enhancing, improving and outperforming.
2.3 History of crowdsourcing: Is crowdsourcing really new?

While the term crowdsourcing was only officially coined in 2006 (Howe, 2006a), the concept itself is actually not new and has historical roots. *The Economist* (2008) reports that crowdsourcing had its roots as early as 1714. At this time, the British government established the *Longitude* prize which put forward a cash prize of 20,000 pounds (a very large amount for the day) via an open call aimed at the crowd, that is an anonymous and un-prequalified public, to help establish both simple and practical ways to determine the position of ships while at sea. The winning solution was offered by John Harrison, a carpenter and clockmaker by trade who invented the marine chronometer, which measured the difference in time between two geographic locations of Greenwich, England and the placement of the ship (Gurley, 2014).

In the late 1800s in the United Kingdom, the *Oxford English Dictionary* was compiled via a form of crowdsourcing, whereby a crowd of over 100,000 public contributors over a period of 70 years helped create meanings and origins of words. Lanxon (2011) states: “the Oxford English Dictionary was arguably history's first massively-crowdsourced collation of English knowledge.” Lanxon (2011) goes on to discuss the similarities between this old process of crowdsourcing to a newer form in the guise of *Wikipedia*. In a similar vein to the earlier *Oxford English Dictionary*, *Wikipedia* has been formed from large numbers of worldwide crowd contributions focussing mainly on content creation, editing, and consensus-style decision-making regarding final published versions along with foreign language translations.

As Afuah and Tucci (2012, p. 355) state: “Crowdsourcing may have been around for a long time but the advent of the Internet and other communication technologies has opened up many possibilities for the phenomenon to play out”. Indeed, at least two of the firms listed on Crowdsourcing.org’s crowdsourcing firms’ directory were practising a modern form of crowdsourcing, that is Internet-based, before the official term was coined. One firm, Threadless, has been practicing a modern form of crowdsourcing as early as the year 2000 by using the Internet and established online community-style networks.
2.4 Crowdsourcing and Crowdfunding: A case of mistaken identity

There appears to be some confusion resulting in the term ‘crowdfunding’ being often mistaken for ‘crowdsourcing’. To illustrate this point a recent article in the *Journal of Marketing* (Lutz, 2011) listed ‘crowdsourcing’ in its subject listing for the article but actually had no reference at all to ‘crowdsourcing’ in the actual article – instead there were five references to ‘crowdfunding’ in the article’s body. The term ‘crowdfunding’ was not listed at all in the subject listing for this article.

Unfortunately this example illustrates how readily each term stands in for the other when they are actually quite different. When even scholars publishing in well-respected academic journals are mistakenly substituting these terms it is even more difficult for practitioners and indeed laypersons to differentiate the two. Mollick (2014, p.1) highlights the (surprising) lack of academic scholarship in the arena of crowdfunding:

> Despite over a billion dollars spent by over millions of individual crowdfunding backers, and large-scale action by the US Congress to encourage crowdfunding as a source of capital for new ventures, even basic academic knowledge of the dynamics of crowdfunding is lacking.

Some initial attempts have been made to define crowdfunding. Crowdfunding is defined by Lambert and Schwienbacher (2010, p.6) as:

> an open call, essentially through the Internet, for the provision of financial resources either in form of donation or in exchange for some form of reward and/or voting rights in order to support initiatives for specific purposes.

This definition was recently further refined by Mollick (2014, p.1) to run:

> Crowdfunding is a novel method for funding a variety of new ventures, allowing individual founders of not-for-profit, cultural, or social projects to request funding from many individuals often in return for future products or equity.

Mollick’s (2014) view is that crowdfunding is a confluence of crowdsourcing and microfinance. In terms of their differences, both crowdsourcing and crowdfunding are similarly defined by the involvement of open calls and by making use of the Internet. However a key difference is that crowdfunding involves the crowd of individuals or firms running the crowdfunding website using it as a source of funding, not as a source
of labour, ideation, co-creation, open innovation and/or creativity as with crowdsourcing. In crowdfunding, individual crowd members respond to (usually Internet-based) requests to fund projects, ideas and inventions. As noted earlier, a key basic difference is that in most instances of crowdfunding the crowd pays money, in crowdsourcing the crowd usually receives money.

Oftentimes, as in the case of leading crowdfunding firm Kickstarter.com, crowd individuals provide small amounts of funding, which *en masse* may add up to quite sizeable amounts. For example, since crowdfunding website Kickstarter’s launch in 2009, 6.6 million individual crowd members have pledged $1 billion funding towards 65,000 individual projects posted by individuals, firms, not-for-profits and organisations (Kickstarter, 2014).

Yet another intriguing newcomer to the ‘crowd’ arena is ‘crowdshipping’ – although this term is so new that it has not been widely confused (yet) with the more generic term ‘crowdsourcing’. Crowdshipping works in a manner that when an individual or business requires an item to be delivered they crowdsource the job to a large network of pre-approved, independent drivers not employed by the company who have the capacity to courier/ship goods (Botsman, 2014). Such crowdshipping models do not require:

> ...asset-heavy infrastructure of warehouses, vehicle fleets, fuel costs and employed drivers that traditional logistics companies have to pay for and manage. Instead they use technology to create access to an abundant source of under-utilized assets to create a powerful new cost-effective logistics system. It’s an asset-light model” (Botsman, 2014, p.56).

In spite of the rising popularity of crowdfunding and the arrival of one of the newest ‘crowd’ entities, namely, crowdshipping, the subject matter in this study firmly resides with crowdsourcing. However, at times, the occasional example of crowdfunding or even crowdshipping may be used to incidentally highlight some of the workings of the crowd itself.

2.5 Mainstream organisation adoption of crowdsourcing

Crowdsourcing is not just practised in crowdsourcing-centric firms. It is being used by mainstream organisations in increasing numbers. Boudreau and Lakhani (2013) state
in relation to mainstream organisations such as Apple: ‘crowds are becoming the partner of choice’. A good example of the way crowdsourcing is being used by mainstream firms is to consider Volkswagen’s use of crowdsourcing to help design a futuristic car, which it termed the ‘People’s Car Project’ and was launched in China in 2012. Somewhat humorously, *The Age* newspaper (Park, 2012) reported that: “Volkswagen has added a few new designers to its car development team - about 1.3 billion of them, to be exact.”

Park (2012) views the project as being aimed to tap into the 450 million Internet users in China to encourage widespread contributions of new car designs. The project’s website attracted 33 million web visitors and led to 119,000 ideas being submitted (Gates, 2012). The winning entry resulted in the design and eventual production of a very innovative disc-shaped hover car which used electromagnetic levitation to float above the roadway in Chengdu, a region characterised by subterranean magnetic minerals. The fact that the winning design was from a young female Chinese student, Wang Jia, speaks of the ability of crowdsourcing competitions to help mainstream firms to locate talent in unusual or unexpected places. Wang Jia, a student at the Chengdu Vocational College of Agricultural Science and Technology, envisioned a small urban vehicle designed to overcome traffic congestion in Chengdu. She based it on the idea of a small “floating rice ball” which could be parked anywhere, unbelievably even in the air (Cohen, 2012). An image of the concept car is illustrated at Figure 2.1.

**FIGURE 2.1**
An image of Volkswagen’s concept of floating car resulting from crowdsourcing car design in China in 2012 (Park 2012)
There have also been some outstanding examples of ailing firms which have used crowdsourcing creatively to help them survive and ultimately thrive. Part of the lure of crowdsourcing for mainstream firms is the potential boost to the firm’s capabilities it provides when executed well, for a relatively modest cost. The other side of the coin is that crowdsourcing can elicit a type of ‘collective intelligence’, where the many eyes on data of the crowd plus their collective analysis or contribution can yield extraordinary results. For example, Goldcorp, a foundering gold mining company, was strike and debt-ridden and suffered from crippling high production costs. Eventually it was forced to abandon mining operations. In desperation the company’s CEO ran a crowdsourcing competition known as the ‘Goldcorp Gold Challenge’, throwing open the company’s geological data information which “challenged the world to do the prospecting” (Tapscott & Williams, 2007). The campaign yielded some outstanding results. Tapscott and Williams (2007) report:

*Within weeks, submissions from around the world were flooding into Goldcorp headquarters. There were entries from graduate students, management consultants, mathematicians, military officers, and a virtual army of geologists. "We had applied math, advanced physics, intelligent systems, computer graphics, and organic solutions to inorganic problems. There were capabilities I had never seen before in the industry," says McEwen. "When I saw the computer graphics, I almost fell out of my chair."

Happily for Goldcorp, the crowdourced collective intelligence pooled from the Goldcorp Gold Challenge eventuated in a yield of $3 billion worth of gold – a staggering eight million ounces from 110 crowd-pinpointed physical mining locations. The company’s future was now secure (Tapscott & Williams, 2007).

In terms of the adoption of crowdsourcing in mainstream organisation, Shingles and Trichel (2014) predict that a crowdsourced labour pool will become legitimised as a *bona-fida* component of many mainstream organisations’ distributed workforce strategies. While they acknowledge that crowdsourcing is in its early stages, they call for mainstream organisations to commence re-drawing their incentive structures, operation models, performance management and delivery models in preparation for newer workforce strategies encompassing new phenomenon like crowdsourcing. Their view is that the benefits of doing so will help mainstream organisations to achieve scale, reach and outcome paybacks.
Echoing this view from Deloitte (Shingles & Trichel, 2014), Accenture (2014, pp.38-39), in a similar 2014 trend paper for industry, posit in relation to crowdsourcing:

Current markets are being disrupted by companies that are employing latent talents or assets made available through digital technology. Businesses can no longer be on the sidelines watching and waiting to see what will happen next and hoping to grab the coattails of the next big idea.

2.6 Perceived problems associated with crowdsourcing

2.6.1 Poorly conceived/executed crowdsourcing activities by mainstream firms

At times, firms have tried to use crowdsourcing for particular purposes such as marketing activities or public relations campaigns to engage customers and such campaigns have seemingly taken a wrong turn and have provided public opportunity to mock or vent at the company. For example, airline carrier Qantas used a crowdsourcing-style public relations and client engagement campaign to try to improve its corporate image within weeks of preceding months of disastrous service problems including major airline strikes, cancelled flights, plane malfunctions, airport lockouts and major service disruptions in November 2011 in Australia. Qantas ran a well-publicised open twitter-based competition with prizes asking its crowd (of customers/potential customers) to describe a dream luxury in-flight experience. On the results of the competition, Wood (2011) reports:

Within an hour, the hashtag was trending across the country, but the tweets were not quite what management expected.

@GrogsGamut tweeted: "#QantasLuxury- when the passengers arrive before the couriers delivering the lockout notices do".

ABC radio's PM presenter Mark Colvin, @Colvinius said: "Getting from A to B without the plane being grounded or an engine catching fire. #qantasluxury".

And @the-aaron-smith said: "#qantasluxury is chartering a Greyhound bus and arriving at your destination days before your grounded Qantas flight".

It seems the crowd itself took control of this crowdsourcing campaign to vent their collective anger, tinged at times with sarcastic or deprecating humour. This was a good
example of a crowdsourcing activity that was thoughtless and ill-timed and provided the crowd an opportunity to publicly censure and/or ridicule the embattled airline.

2.6.2 Un-credentialed, irresponsible crowds

Levy, as far back as 1984, outlined the concept computer ‘hacker ethic’ which was a precursor to some of the ethos of crowd activity exhibited in crowdsourcing. This ‘hacker ethic’ had the hallmarks of crowd production encompassing unfettered computer network access along with the active (sometimes underground) rejection of any attempts by a centralized authority to control it. Levy (1984) also developed a concept around a hacker meritocracy whereby technical merit was trumps and the sole important criteria concerning hacker credentials. Other “bogus” criteria such as degrees, age, race or position did not matter in this ‘hacker ethos’ (O’Neil, 2010). Such hacker crowds with their anarchical mindset, despite their lofty meritocracy-based ideals, could at times be irresponsible, unlawful and could cause harm with criminal activity or mischief when disrupting proper computer network functioning or perverting information flow. A lack of credentials could be dangerous when dealing with particularly secure or sensitive virtual information related to a firm’s intellectual property or perhaps a country’s national security.

O’Neil (2010) takes pains to outline the problems with anonymous crowds which can be experienced when using crowdsourcing. His view is that, at times, anti-credentialism combined with anonymity may result in uncertainty, irresponsibility, the rise of crowd-based cliques and the firm having to scramble to elicit pseudo legal competencies in order to resolve conflict. O’Neil (2010, p.3) outlines the main issues with using anonymous crowds using as an example Wikipedia – a popular and free-access online encyclopaedia built largely by anonymous crowds as thus:

*What are the drawbacks of anonymous crowdsourcing? The costs for Wikipedia consumers and producers of doing away with editorial or expert oversight can be separated into two main categories: costs directly affecting the quality of the product, and indirect costs which divert resources from the task of building an encyclopaedia.*

This is a salient cost/benefit argument when it comes to mainstream firms considering using crowdsourcing. The loss of control felt by firms engaging in crowdsourcing when
over-run by ‘hacker’ style crowds can potentially be a very real and negative proposition.

2.6.3 Groupthink and crowdsourcing

Both James Surowiecki's (2004) *The Wisdom of Crowds* and Clay Shirky's (2008) *Here Comes Everybody: The Power of Organizing Without Organizations* were best-selling books outlining the huge benefits of unfettered crowds and the benefit of using such free-wheeling, anonymous crowds in group crowd production. However, despite the Internet crowd utopic notions outlined in these books, there may be yet more negative issues with such large anonymous crowds. Chesbrough (2011, p. xix) highlights the problem of herd mentality and crowdsourcing: “If, for example, the ‘crowd’ of contributors are not independent of one another, the crowd can become a herd charging off in a single direction instead of balancing the different perspectives of people to provide a reliable prediction of a future event or an activity.”

Another associated problem which has been known to develop with firm-based crowdsourcing activities is the emergence of so-called ‘group-think’. Janis (1982, p.9) defines ‘group-think’ as “a mode of thinking people engage in when they are deeply involved in a cohesive in-group, when the members striving for unanimity override their motivation to realistically appraise alternative courses of action”. Janis (1982) characterised members of ‘group-think’ as overestimating the invulnerability and inherent morality of the group, as being closed-minded and with a strong sense of in- and out-group members with pressure toward uniformity inside the group. This type of grouping can distort decision-making and can result in faulty attribution logic and poor operational outcomes. Janis’ (1982) research points that group-think tends to flourish in environments which are restrictive, not open or transparent and where a particular person or leader is in a position to exert undue influence.

A good example of this type of group-think was exhibited in a crowdsourcing activity conducted by Island Records in collaboration with pop star idol Justin Bieber. The firm, along with the pop idol decided that they would crowdsource the decision of which country should be the kick-off location of a world singing tour planned by Bieber. Van Buskirk (2010) in *Wired Magazine* reported that a group of anti-Bieber hackers/pranksters known as *4chan hive-mind* hijacked the voting to ‘group-think’ the
suggestion of North Korea – with the view he (Justin Bieber) might not return - as the location. This is clearly an example where an in-group dominated by one-mindset results in decision-making which would be anathema to Bieber and his record company.

Fortunately in the case of crowdsourcing, most crowdsourcing-centric firms have very open and transparent processes and de-emphasize the effects of any one person/all-powerful-group by allowing multitudes of self-contained individuals to provide their own content/ideas or work activity.

2.6.4 Exploitation of the crowd

One of the criticisms levelled at crowdsourcing firms is that they exploit the crowd. Typical of some of this brand of sentiment is the image in Figure 2.2 below posted by an anti-crowdsourcing blogger Casselman (2009):

![Anti-crowdsourcing sentiment in an online posted image](image)

This is accompanied by an anti-crowdsourcing definitional spin. Casselman (2009) writes: “crowdsourcing is offloading a task to a large audience outside the company, so that the company does not have to pay regular employees to perform the task”. He goes on to state:

> You will see in the corporate come-hither advertisements (The consumer is the creator! Wheeeeee!) written to encourage you to take part in crowdsourcing that huge benefits in personal creativity and imagination and perhaps a modest payment will accrue to you, the hapless schnook asked to do the corporate work for next to nothing. Well, if you believe that, you are a schnook. What the corporation is really doing is tricking you into doing company work for little or no pay... Fascinating marketing concept and at such a low cost! You get the
customers to come up with ideas for you and then you fob them off with chump change and loose pennies.

The accusation of crowdsourcing firms being little more than ‘digital sweatshops’ has been raised by crowdsourcing critics. A recent article in Wired raises some of the issues around the ‘digital sweatshop’ sentiment. Sterling (2014) poses the following series of important questions:

Who and where are the workers and how do they understand their situation? How and where do they act in political terms?

How can we analyze digital labor as a global phenomenon, pertaining to issues like underdevelopment and supply chains?

Which theories and concepts can help us to frame our thinking about the gridlock of digital work?

How do gender, race, ability, and class play out in the diverse fields of digital labor?

Alternatively, how do we conceptualize digital work that is underwaged and often coded as feminized?

How relevant are unions to the millions of crowdsourced workers?

What are the reasons for withholding legislation that would allow for an enforcement of the Fair Labor Standards Act in the crowdsourcing industry?

Are there new forms of contracts or widened definitions of employment that would better address today’s work realities?

Such sentiment does raise questions around the ethics of unpaid/low paid crowds, gender/race/class politics, unionisation and work definitions.

Crowdsourcing practise does also raise the ugly spectre of desperate-for-any-work crowd members being potentially exploited. Related to these issues, there is currently an ongoing Californian court case Otey vs CrowdFlower, whereby the prosecuting party, Christopher Otey, is suing crowdsourcing firm CrowdFlower for failing to pay him the USA minimum wage for his time/production outlay. In relation to this court matter, Shaw (2013) in a Harvard-sponsored weblog, puts forward some of the intricacies of the argument:

...there are a lot of reasons to believe that crowdsourcing represents a fundamentally different sort of phenomenon than the varieties of “work” and workplace abuses the US congress sought to regulate with the FLSA back in 1938.
For starters, crowd work is radically flexible – in terms of time and location – as well as minimal in terms of the commitment, skill, and obligations required of workers. As a result, it’s not clear that the relationships established between requesters and providers of work in this context are really anything like relational contracts that exist between traditional employers and employees. Crowd workers do what they for a variety of reasons, in a variety of ways, and under a variety of conditions, making it pretty hard to determine whether they ought to be considered employees of the organizations that may play a role in compensating them for their efforts.

Along with the arguments raised above, crowdsourcing apologists raise counter arguments that crowdsourcing provides a legitimate alternative employment source. Lukas Biewald, owner of CrowdFlower is an apologist for crowdsourcing. He is quoted by Cushing (2013):

CrowdFlower conducts worker-satisfaction studies regularly, he said—“and we constantly find that over 90 percent of them are satisfied with what they’re doing.”

The counterargument to that is, of course, that a job doesn’t need to be involuntary to be exploitative, but Biewald has a bigger point. “I find it interesting that the people who complain”—meaning, mostly, academics, activists, and tech-industry observers—“are not the workers,” Biewald said. “And the workers would actually be pretty pissed off if the people complaining were successful.”

That’s perhaps what’s most unsettling about all of this: The workers aren’t complaining—at least not publicly. If they did, it’d be easier for lawyers like Felstiner to regulate; easier for labor activists like Jones to decry; easier for all of us to wrap our heads around. If it’s hard to understand that people across the world and in our own backyards are doing this kind of labor for these kinds of wages, it’s even harder to understand why many of them don’t seem to mind. In a stratified world, exploitation is relative, and what’s appalling to progressive-minded Americans may be a godsend for people in developing nations.

Oftentimes developing country crowd members are paid developed country wages, which benefit those developing country crowd members in the currency exchange crossover. Such countries also face high unemployment levels and oftentimes little hope. The crowdsourcing firm CloudFactory is based in Nepal and has recently expanded to Kenya. Mark Sears, a Canadian entrepreneur, is the founder and claims to pay his developing country staff fairly – as much as a local banker would make. Sears (2014) states:
Over the last 5 years I have witnessed the incredible talent, motivation and potential of people in Nepal, Kenya and other developing nations, and yet they are cut off from the global economy. Many were educated in English schools, earned a bachelor's or even master's degree, use Facebook daily and yet there is hardly any job opportunities for them (unemployment rates of 40%+).

The saddest thing about poverty is wasted talent. Unlocking this human potential is the driving force behind CloudFactory where we aim to connect 1 million people to basic computer work over the next 5 years.

In addition, crowdsourcing apologists point that crowdsourcing is voluntary, often fleeting and due to its enormous scale (with crowd workers sometimes in the multiple millions) impossibly difficult to negotiate individual contracts in the same way a traditional employer would with a traditional employee.

2.7 Summary of Chapter 2

This chapter has brought crowdsourcing into a sharper focus by excising it or delineating it from related concepts. It also illustrates the notion of the nascence of crowdsourcing as a phenomenon and as a scholarly research topic.

The chapter has also covered the history of crowdsourcing and how it has evolved into its current Web 2.0 iteration. The adoption of crowdsourcing inside mainstream operations of large firms serves to illustrate that it is a growing and increasingly perceived as a valuable phenomenon in conventional businesses.

The chapter has also provided depth around the topic of crowdsourcing by providing an outline of what conditions are present when crowdsourcing fails or is executed less than optimally. The perceived failings and disadvantages of crowdsourcing have been illustrated.

The next chapter provides details of a preliminary impression-forming prequel phase used to establish a prima facie view regarding whether the study was viable and to help form a direction for the literature review and later for question formation for the informant interview phase.
3. CROWDSOURCING IMPRESSION- FORMING PREQUEL STAGE

3.1 Introduction

The inclusion of a so-called ‘impression-forming prequel stage’ chapter is unusual. The reasoning behind it is that the topic, when this study commenced in 2011, was extremely new and had attracted very limited scholarly research. This preliminary stage is a type of ‘proof of life’ for the topic and so all data presented in this chapter only is strictly relevant to the start date of the research study, being 2011. The prequel stage outlined in this chapter, therefore, examines the development of crowdsourcing from its Web 2.0 inception in 2006 to the start of the study in 2011.

This impression-forming step was deliberately conducted prior to the formal literature review to help form a more rounded initial understanding of the topic due to its recent emergence. Such a step was used to assist in uncovering a prima facie view of what crowdsourcing is and its related descriptive attributes in accordance with both public viewpoints and scholarly articles.

A three-step process in order to form an initial impression of crowdsourcing was undertaken in this chapter. The first step was to undertake a public-sourced trend analysis to understand whether crowdsourcing was trending up, staying flat or trending down. This was to help determine that crowdsourcing was not simply a business trend which had already peaked and may now be waning and potentially disappearing as a concept.

The second step was to examine publicly sourced viewpoints in terms of how crowdsourcing was conceived, defined and explained. This was done via an Internet-based Google images search using the term ‘crowdsourcing’ and then open-coding the results to form an informed view.

The third step was to undertake a prima facie literature review in order to determine how many scholarly and practitioner articles exist which utilised the concept or term ‘crowdsourcing’ as a main topic of discussion. This was to help uncover the central concerns of scholars concerning crowdsourcing and in what specific fields crowdsourcing occupies as an article topic. All three of these processes were conceived
to help guide important aspects of the study’s methodology, especially elements such as providing a starting point for conceiving content for the case study interview questions.

3.2 Trend Analysis

Bansal and Corley (2011) in an editorial article in the *Academy of Management Review* highlight that non-traditional data sources should be encouraged in qualitative scholarship. In the spirit of utilising a ‘non-traditional’ data source I utilised Google. The first step was to gain an impression - through *Google Trends* - of how the search term ‘crowdsourcing’ was trending against self-selected public searches. Public Internet searches show scaled trends based upon the average in relation to each preceding time period (Figure 3.1).

**FIGURE 3.1**

Google Trend scaled data based on popular public searches of the term ‘crowdsourcing’

Google Trends (2011) provides advice on the numbers on the graph which reflect how many searches have been done for ‘crowdsourcing’, relative to the total number of
searches done on Google over time. The searches do not represent absolute search volume numbers, because the data is normalised and presented on a scale from 0-100. Each point on the graph is divided by the highest point and multiplied by 100. When Google Trends analysts do not have enough data, 0 is shown – which is a case in point for anything related to crowdsourcing prior to 2006 – when the search term effectively did not exist. As is evident on this graph, there was no public search activity prior to 2006 on the search term ‘crowdsourcing’ (Google Trends, 2011).

The graph (Figure 3.1) illustrates that the general trend on crowdsourcing is an upward slope indicating steady continuing public search interest building upward soundly over time from mid-2006 to 2011. This trend would seem to indicate that crowdsourcing is not merely a short-term business fad but has elicited steadily increasing public interest from a very low base in 2006. This is an important impression-forming step because it provides a level of confidence that crowdsourcing is not merely a phenomenon which is flat-lining or even slowly dying but instead it continues to build public-sourced interest.

3.3 Literature Analysis of crowdsourcing

Again, in order to assist with forming a prima facie view of crowdsourcing and its critical elements, particularly in relation to how it is practiced and expressed, a three-tiered approach was undertaken.

The first step was to seek out conceptual understandings via descriptive attributes expressed about crowdsourcing. To assist in uncovering those descriptive attributes of the concept of crowdsourcing a multi-step process was followed. First, in order to construct a description of the main attributes of crowdsourcing, I used the ABI/INFORM database in September 2011 to search for scholarly peer-reviewed, full-text journals that contained the term ‘crowdsource*’. The results revealed that there were only 21 scholarly journal articles using the term ‘crowdsource’ or ‘crowdsourcing’ or ‘crowdsourced’ dating from December 2006.
The second step entailed a broader search of scholarly journals, excluding the full-text restriction. This search revealed a further 25 scholarly journal articles citing ‘crowdsource/ crowdsourcing/crowdsourced’. This total of 46 articles appeared in journals belonging to diverse disciplines including Management, Information Management, Computer Science, Marketing, Communications, Sociology, Engineering and International/ Government Affairs. Of those 46, a total of nine appeared to be associated with Management discipline journals, dating from mid-2009. Two of the nine Management-discipline journals appeared in a French-language publication. Three out of the nine articles in Management discipline journals were non-substantial articles of three pages or less.

The third step was based on detailed reading of the scholarly texts relating to crowdsourcing. An analysis was conducted of the 46 scholarly texts that formed the total population in all disciplines expressing views and analysing ‘crowdsourcing’ from December 2006 to September 2011. The 2006 origin date for the scholarly articles reflects the fact that the modern term ‘crowdsourcing’ had its genesis in that year (Howe, 2006b). This is also evidenced by public Internet searches on popular search engine Google, which shows scaled trends based upon the average in relation to each preceding time period (Figure 3.1). As can be seen on the Figure 3.1 graph, there were no substantial public search activities prior to 2006 on the term ‘crowdsourcing’ (Google Trends, 2011).

The content of the 46 scholarly texts was closely examined in relation to how ‘crowdsourcing’ was defined or described and key attributes based on the description(s). From the first 2006 article, common attributes, descriptors, phrases and concepts were identified, compiled and coded. Of these 46 articles, 15 did not specifically define or describe crowdsourcing in any meaningful manner. These 15 articles from the original 46 articles were discarded from consideration and therefore the common attributes were built based on the contribution of the 31 remaining articles.

The combined content contribution of the 31 articles resulted in the final coding of 15 key attributes associated with a definition or description of crowdsourcing. Some articles contained more than one descriptive attribute.
Of the 15 attributes which appeared in the scholarly articles, descriptors included that crowdsourcing was seen as a type of business model, it used Web 2.0 technology, it employed or engendered collective intelligence/wisdom, it used a crowd, the crowd was large, some systemic controls were levered, it was co-beneficial to the organisation and contributor, the organisation could extract commercial value, there were limitations on it, it was considered an organisational capability, it used an open call process, the organisation controlled the process, the intellectual property could be exploited by the organisation, it was low-cost, and it was a form of outsourcing. These are summarised in Table 3.1 below.
As can be seen by the information in Table 3.1, the number of scholarly articles steadily increased and the descriptive attributes of crowdsourcing became denser and were, as a result, more sophisticated as time progressed from 2006 onwards. It is interesting to note that there were no articles describing crowdsourcing in 2007. The
sense of crowdsourcing requiring a large crowd has become more important in the past two years as depicted on the table, however extracting commercial value, ascribing limitations and describing it as a firm capability has appeared to become less important to scholars later in 2011 than in the earlier articles.

Table 3.2 below illustrates and summarises the 15 most profligate counts of descriptive labels related to crowdsourcing in descending order as extrapolated from the 31 scholarly literature articles.

<table>
<thead>
<tr>
<th>Descriptive labels</th>
<th>Number of scholarly articles in which it appears</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Business Model</td>
<td>16</td>
</tr>
<tr>
<td>Web 2.0</td>
<td>11</td>
</tr>
<tr>
<td>Collective Intelligence</td>
<td>10</td>
</tr>
<tr>
<td>Crowdsourced resource</td>
<td>10</td>
</tr>
<tr>
<td>Business value</td>
<td>6</td>
</tr>
<tr>
<td>Large crowd</td>
<td>6</td>
</tr>
<tr>
<td>Co-beneficial</td>
<td>5</td>
</tr>
<tr>
<td>Controls required</td>
<td>5</td>
</tr>
<tr>
<td>Limits</td>
<td>5</td>
</tr>
<tr>
<td>Firm capability</td>
<td>4</td>
</tr>
<tr>
<td>Open call</td>
<td>4</td>
</tr>
<tr>
<td>Firm controls</td>
<td>3</td>
</tr>
<tr>
<td>IP vests with firm</td>
<td>3</td>
</tr>
<tr>
<td>Low cost</td>
<td>3</td>
</tr>
<tr>
<td>Outsourcing</td>
<td>3</td>
</tr>
</tbody>
</table>

The most popular descriptor label of crowdsourcing as a new business model is a logical by-product of recent developments and rapid advances in high speed communication and information technologies, evidenced by the rise of interactive Web 2.0 Internet communication. Such new communication technologies have fostered the development of new ways of value creation and delivery, which in turn, have fostered the creation of newer unconventional exchange mechanisms and transaction architectures (Zott, Amit & Massa, 2011). It has also allowed organisations to invent and design new boundary-spanning organisational prototypes as expressed by business models (Dunbar & Starbuck, 2006).
Given its obvious new emergence as a research topic and in the absence of a deep articulation of crowdsourcing and a thorough definition, other scholars were simply trying to be as descriptive as possible, perceiving it as an entity defined by its ‘large crowd’ and ‘open call’ as well as its ‘Web 2.0’ reliance. In this sense it was interesting that some of the other descriptors used by scholars were trying to make sense of it in terms of what it was and just as importantly whether it was something new or something which was a spin-off of something old. For example, many scholars perceived it as a (new) business model, yet some scholars perceived it as an artefact of (existing) outsourcing.

There were only a very small number of articles which took on a disparaging tone or portrayed crowdsourcing in a negative manner. This small amount of negative sentiment associated with crowdsourcing, in the main, included speculative notions that crowdsourcing might not work for an organisation in terms of crowd attraction ability and in terms of a feeble crowd output. Crowdsourcing was seen by one scholar as exploitative of the crowd, destructive to certain industries such as design, a source of ultra-cheap labour and an unsustainable organisational tool longer-term (Euchner, 2010). The negative attributes speculated to be associated with crowdsourcing were not prolifically mentioned enough to appear on the list.

The attribute of collective intelligence also found its way into scholarly views of crowdsourcing. Typical of the notion of crowdsourced ‘collective intelligence’ was this passage located in the collection of 46 crowdsourcing scholarly articles by Bonabeau (2009, p.47):

...it can provide a diversity of viewpoints and input that can deter self-serving bias and belief perseverance. Diversity can also help combat pattern obsession and negative framing effects. Because of those and other benefits, many companies have begun to tap into collective intelligence through the use of Web 2.0 and other technologies... The underlying philosophy here is that there are people out there who can help you and, moreover, those individuals are not necessarily where you might expect them to be.

The use of crowdsourcing to reap collective intelligence is an early statement that it is a potentially valuable and value-creating entity.
3.3.1 Value creation – First impressions
The notion that descriptive attributes mentioned early in the modern genesis of crowdsourcing included descriptors like co-beneficial, commercially valuable, low cost and collective intelligence-gathering and ip-generating is illuminating. Crowdsourcing in its early incarnations has been clearly showing some signs of being a business phenomenon which could create various types of value and engender mutual benefit for its stakeholders.

The notion that crowdsourcing was most likely to be perceived and named by scholars as a new business model helps to formulate the view that the ‘business model’ may be worthy of further discussion in the literature review and potentially as a topic at the case interview stage. In addition, interview questions which draw out notions of where exactly the value lies and how it is created was deemed a worthy undertaking based on this initial impression-forming exercise.

3.4 Publicly-sourced image analysis

Due to the relatively low number of scholarly articles available for analysis I also examined public contributions on the terminology ‘crowdsourcing’. This was to further assist with forming an impression of crowdsourcing and helping to form a viewpoint prior to the next step of further serious scholarly work on the topic. I felt some confidence to seek non-traditional data sources such as these publicly-sourced ones - which might include image-related examples of photographs and organisational artefacts - due to being inspired by a recent editorial article in the Academy of Management Journal encouraging scholars to use such non-traditional sources (Bansal & Corley, 2011).

I used a simple Internet-based ‘Google’ search of ‘crowdsourcing’ which yielded a total of 978 images in the images database. The images database was used in preference to the extended general web-content database because the images allowed more rapid definition and offered a more manageable number than the 10.4 million ‘crowdsourcing’ search results from the larger web database.
Many images were connected to further written, content-rich material which added detailed description to the image. The public authors were typically practitioner-oriented or self-styled experts.

Of those 978 ‘crowdsourcing’ images revealed by the online search, 177 were duplicates which left 801 images. A focused analysis was conducted on these 801 images. Based on a close examination of the initial images an open coding system was employed with the final result that categorised the crowdsourcing images into the following categories: informational, explanatory, symbolic, problematised and collective intelligence. The ‘informational’ category provided a pointer to an individual piece of information related to crowdsourcing such as a book title or a website or an event. The ‘explanatory’ category made (often detailed) efforts to explain dynamic, relational aspects of crowdsourcing - often with charts and diagrams - and would include elements like context, exclusions and linkages. The ‘symbolic’ category denoted a single image symbolising an important attribute commonly associated with crowdsourcing, such as a large crowd of people for instance. The ‘problematised’ category comprised images which were disparaging of and displayed negative sentiment toward crowdsourcing. The final category, ‘collective intelligence’ comprised images denoting stylised content closely linking collective intelligence (crowd wisdom) with crowdsourcing. A more detailed description of the five categories emanating out of the analysis of images is available at Appendix G.

The top two categories together formed 81 percent of the various types of image, comprising ‘informational’ category at 52 percent and ‘explanatory’ at 29 percent. Therefore, clearly, most publicly-sourced images related to crowdsourcing attempted to both inform about it and explain it. The ‘explanatory’ images, typically illustrated by a flow chart or relational diagram, were also characterised by associated rich written descriptions. These were mostly concerned with depicting it as a new business model; an entity belonging to Web 2.0; a co-beneficial phenomenon employing a large crowd that is low cost with the addition of commercial value; and, which can at times, elicit collective intelligence. Interestingly, most of these descriptions were also closely mirrored in the initial 31 scholarly articles which I examined. In particular, the publicly-sourced ‘explanatory’ images and their associated rich written descriptions
helped form an initial impression that crowdsourcing-related descriptors such as ‘business model’, ‘co-beneficial’, ‘large crowd’, ‘low cost’ and ‘commercial value’ were considered important by public ‘experts’ and practitioners, in tandem with scholarly sources.

3.5 Conclusion

The preliminary impression-forming prequel phase has proved to be a stimulating and valuable exercise in providing a *prima facie* view of what is a very new phenomenon in crowdsourcing. Notions that crowdsourcing is a large-crowd utilising business model using Web 2.0, as well as a new resource, a method of collecting group wisdom and a phenomenon that is valuable, low cost and co-beneficial are significant pointers to assist in formulating both a formal literature review focus and a potential basis for assisting with formulating interview questions for future case studies.

In addition, the general steady trending up of ‘crowdsourcing’ as a search term by members of the public as illustrated by the Google Trends (2011) graph (Figure 3.1) provides a degree of confidence that the topic of ‘crowdsourcing’, while nascent, is not a mere fad nor a business concept which is fading from popular scrutiny and interest. To base a research project on a new topic may potentially run the risk of the sudden obsolescence or obliteration of the topic. Providing some basis for a view that the topic is not facing impending obliteration allows for some degree of comfort to progress the topic as a research study beyond the prequel stage.
4. LITERATURE REVIEW - PART 1 – CROWDSOURCING

4.1 Introduction

The literature review is divided into two parts. The first part focuses purely on the phenomenon of crowdsourcing and examines how it is conceived and practised in firms, and what elements are important to its practice. The first part of the literature review also examines crowdsourcing alongside commonly related disciplines such as open innovation. Finally, the first-part literature review provides an outline of how crowdsourcing relates to the concept of collective intelligence and how it is conceived by academics.

The second part of the literature review focuses on value creation in respect to crowdsourcing. A variety of common theoretical lenses relating to value creation in the strategic management field are used to uncover how crowdsourcing may create value. These common theoretical lenses in relation to value creation include Schumpeterian innovation, transaction cost economics, resource-based and knowledge-based views of the firm, dynamic capabilities, Porter’s value framework and network effects. A brief examination of social exchange theory and stakeholder theory is also included. An analysis of crowdsourcing and business models is also contemplated.

Mitchell (2014) helpfully presents the dilemma for researchers conducting grounded theory in terms of whether or not to take into account prior literature at the commencement of a grounded theory study. Mitchell (2014) presents the dilemma that considering prior work may constrain new insights. However, on the other hand, it is practical to fix a tentative set of codes at the start of a project as a starting point – leaving new ideas to emerge. His view is that there is a middle ground where grounded researchers may adopt an orienting approach where a prior literature review will provide a commencement point and a partial frame but not be so sharp or detailed to develop a priori hypothesis.

The study will take this middle ground by including a literature review as a means to orient the study and provide a starting point for later theoretical discussion. However
the literature review will be used to partially frame the new empirical context while attempting to minimize the sullying effect. As far as possible I will attempt to minimise any pre-empting or overshadowing of the purity of the process of examining the grounded data to create new theory.

4.2 Crowdsourcing: A nascent scholarly topic

A search was conducted utilizing the ABI/Inform database to uncover scholarly work relating to crowdsourcing itself as a keyword topic. This was done in order to provide a comprehensive understanding of how crowdsourcing is perceived and conceived in scholarship. It was also used to provide some preliminary ideas in relation to the first research question in terms of how crowdsourcing is conceptually characterised in terms of essential features.

In the prequel stage, as outlined in the previous chapter, complete, full-text, peer-reviewed options were utilised to reveal the number of scholarly articles on crowdsourcing using the search term ‘crowdsourc*’ to capture all articles pertaining to search terms of ‘crowdsource’ or ‘crowdsourcing’ or ‘crowdsourced’. The results revealed that there was only a small trickle of articles (fewer than 10 articles for each year) from 2006 to 2010. From 2011 the number of articles started to leap up progressively.

Moving beyond the bounds of the 2006-2011 focussed prequel stage, later enquiries related to scholarly works saw the articles on crowdsourcing moving progressively from 46 in 2011 to 100 articles in 2012 and 102 articles in 2013 and 121 in 2014. However, of all the over 300 scholarly articles on crowdsourcing from 2006 to 2014, only 32 actually had included “crowdsourcing” in the article title/subject focus, which indicates that oftentimes the actual topic of crowdsourcing may only be incidental to the article’s core focus. In terms of its nascence as a topic, around half the articles on crowdsourcing were classified as ‘experimental/ theoretical’.

A summary table (Table 4.1) based on the ABI/Inform search on ‘crowdsourc*’ listing the scholarly articles and associated scholarly journals from 2006 to 2013 is included below. These were articles with crowdsourcing in the title of the article and so
were deemed to be more directly focused on crowdsourcing rather than containing an arbitrary mention. Only 63 scholarly articles (21%) are contained in ‘Management/Business’ oriented journals.

<table>
<thead>
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<th>Articles</th>
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<tr>
<td>Tech/Science /Policy</td>
<td>The Futurist</td>
<td>23</td>
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<td>Journal of Information Technology Teaching Cases</td>
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<td>Journal of Marketing Theory and Practice</td>
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<td>Law</td>
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4.3 Crowdsourcing: How it is defined and conceived in the literature

As mentioned earlier, this first literature review section seeks to uncover the perception in the literature of crowdsourcing as a phenomenon to help uncover its conception and the most important elements related to its expression and practice. In terms of a definition of practice in this context, practices are seen patterns of activities which gain coherence through shared meanings and understandings. When taken separately, each activity may appear inconsequential, yet together activities build meaning as a result of their common purpose and understanding of how specific activities should be done (Jarzabkowski, 2005; Smets, Morris & Greenwood, 2012).
In a recent special topic forum on theories of work in the *Academy of Management Review*, Okhuysen, Lepak, Ashcraft, Labianca, Smith and Steemsma (2013) highlight that future theorising by scholars about work and workplaces should seek to broadly incorporate an understanding of how workplace practices operate for different groups and firms. They conclude by encouraging researchers to try to successfully manoeuvre between high level theoretical frameworks and the practice of work and work relationships “on the ground” (Okhuysen et al., 2013, p. 501). This study, in response to this encouragement, makes efforts to provide a grounded view of crowdsourcing as it is conceived and practised inside crowdsourcing firms.

At first glance, I felt it was important to look at recent definitions to help create some *prima facie* conceptions of crowdsourcing. As mentioned in the opening chapter, crowdsourcing is defined as: “the act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, generally large group of people in the form of an open call” (Howe, 2006b). The crowdsourcing construct is still being developed and there have been some recent attempts at a more developed conceptualisation, description or definition of crowdsourcing.

Moving on from the initial 2006 coining of crowdsourcing, Estelles-Arolas and Gonzalez-Ladron De-Guevara (2012) have made a recent attempt at delineating and defining crowdsourcing. Their results were based on the use of six databases including ACM, IEEE, ScienceDirect, SAGE, SpringerLink, and Emerald using search criteria with “crowdsourcing” as a keyword. They found 209 documents with 40 original definitions of crowdsourcing from 32 distinct articles. Estelles-Arolas and Gonzalez-Ladron De-Guevara (2012) created their final definition based on their analysis and the addition of previously created definitional elements:

*Crowdsourcing is a type of participative online activity in which an individual, an institution, a non-profit organization, or company proposes to a group of individuals of varying knowledge, heterogeneity, and number, via a flexible open call, the voluntary undertaking of a task. The undertaking of the task, of variable complexity and modularity, and in which the crowd should participate bringing their work, money, knowledge and/or experience, always entails mutual benefit. The user will receive the satisfaction of a given type of need, be it economic, social recognition, self-esteem, or the development of individual skills, while the crowdsourcer will obtain and utilize to their advantage that what the user has*
brought to the venture, whose form will depend on the type of activity undertaken (pp. 9-10).

Estelles-Arolas and Gonzalez-Ladron De-Guevara (2012) also make some pronouncements to the optimum number of people who form a ‘crowd’ and conclude that the overall number is dependent on the crowdsourcing initiative with the example of the case of the Iceland Constitution crowdsourcing initiative. Iceland decided on an ‘open government’ initiative to crowdsource elements of its Constitution through the input of its citizens via Twitter and Facebook (Morris, 2012). This crowdsourcing initiative opened itself to involvement from a crowd of 330,000 people, while for other crowdsourcing initiatives optimal crowd size is considered adequate at only a few thousand, like in the Lego crowdsourcing initiative case (Estelles-Arolas & Gonzalez-Ladron De-Guevara, 2012).

Crowdsourcing can also be internal to the firm, which is known as ‘internal crowdsourcing’. Byren (2013) defines internal crowdsourcing as the firm extending its problem-solving to a large and diverse group of self-selected contributors beyond the firm’s formal internal boundaries. These contributors encompass and span business divisions, geographic locations and hierarchical structures, and can be potentially included as partners, suppliers and outsourced agents. Clearly in this instance the internal crowd is known to the company although contributions are likely to be anonymous to encourage candour. In a sense, internal crowdsourcing is a more modern form of the decades-old ‘Staff Suggestion Box’ – where staff could (sometimes anonymously) post written contributions concerning improvement or innovation measures.

Crowdsourcing may also be restricted to a pre-defined crowd. This is where the firm may seek input from a particular crowd, which has a special skill, knowledge or abilities or may be from a particular industry or region. An example of this type of crowdsourcing is used by Canadian firm Chaordix. Part of Chaordix’s crowdsourcing work encompasses ‘brand fans’ and they restrict the community to those crowdsourcing participants who have a loyalty or allegiance to a particular brand.

Afuah and Tucci (2012) also make scholarly efforts to broaden our understanding of crowdsourcing by splitting it to two main types, namely tournament-based
crowdsourcing and collaboration-based crowdsourcing. Their notion of tournament-based crowdsourcing occurs where each crowd member self-selects to work on the problem at hand and only the winning solution is chosen. Collaboration-based crowdsourcing is where individual members of the crowd work together to produce one coherent result – the work of many hands and minds. They also make it apparent that the original concept of crowdsourcing has existed for centuries with an example of United States’ ‘Wild West’ Sheriffs using ‘Most Wanted’ posters to enlist the public’s crowdsourcing efforts to support its work in bringing criminal fugitives to justice. However, more recently, since the development of advanced global Internet connections and networks crowdsourcing has been opened up to many more possibilities for it to play out.

There are some potential forms of crowdsourcing whereby, at times, the crowd may be unaware their collective contribution is being used by an organisation to amass knowledge and form strategy. This type of crowdsourcing is referred to as ‘passive’ crowdsourcing. This is defined as that which has been created by the crowd freely, without any initiation, stimulation or moderation in a large number of predefined Web 2.0 social media sources through the firm’s postings, and the extraction from it of relevant knowledge, ideas and opinions (Charalabidis, Loukis, Androutsopoulou, Karkaletsis & Triantafillou, 2014). Another example is described by Har-Noy (2012):

*One of the most famous online examples of passive crowdsourcing is the pervasive reCAPTCHA which supplies websites with images of words from books and requires visitors to decipher the contents to prove that they are in fact human. By entering the correct information, users are unknowingly helping to digitize books. The project has so far transcribed the entire New York Times archive and has been acquired by Google to further digitize traditional print content.*

Passive crowdsourcing, while important to acknowledge and understand, plays a small role in the practice of mainstream crowdsourcing and in scholarly definitions of crowdsourcing. In a similar vein, internal crowdsourcing is infrequently discussed in both scholarly contexts and in mainstream crowdsourcing practices. For example, neither passive nor internal crowdsourcing were mentioned in the 40 original
crowdsourcing definitions sourced by Estelles-Arolas and Gonzalez-Ladron De-Guevara (2012) and they were not mentioned as an element in their final definition.

The intention of the study is to select crowdsourcing firms which demonstrate use of either the tournament style or collaboration style (Afuah & Tucci, 2012) - but alternated so that both styles are included in the study.

4.4 Elements important to the practice of crowdsourcing in organisations

Setting aside both passive and internal crowdsourcing, the essential elements of the phenomenon of crowdsourcing include surprisingly few fundamentals (Brabham, 2008; Howe 2006b). These include use of the Internet, an organisation which initiates an open call, a crowd which voluntarily responds to the open call, a crowd contribution and a mutual benefit.

Beyond the fundamentals are elements of the crowdsourcing phenomenon which are nuanced. These include attributes related to crowdsourcing which may be more variable, contextual and situational within organisations. They include:

1. The organisation’s intention behind the open call and reasons for crowdsourcing;
2. How the organisation is using crowdsourcing, whether as a strategy or revenue-raising activity, for co-creation, open innovation, open source, user innovation or as a business model;
3. Whether the crowdsourcing is internal or external to the organisation;
4. The type of crowdsourcing, whether active or passive (Is the crowd even aware that they are being used for crowdsourcing?)
5. The nature of crowdsourcing, whether collaborative or competitive;
6. The crowd size;
7. The crowd composition;
8. The crowd location;
9. Restrictions placed by the organisation on the crowd such as race, gender, location, hierarchical standing, education levels and availability;
10. The type of contribution offered by the crowd to the organisation whether voting, production, idea-generation, policy formation, search activities and/or creative pursuit;

11. Restrictions on crowdsourcing imposed by the organisation such as time limits;

12. The offer (or not) of prize money or payment by the organisation; and


Considering these nuanced elements, which exist beyond the fundamentals of crowdsourcing, makes it more challenging for scholars and commentators to formulate a single definition or pithy description which captures all elements of crowdsourcing.

### 4.5 Crowdsourcing and related disciplines

This study differentiates crowdsourcing from outsourcing, open innovation, open source, co-creation and user innovation, which are related practices, concepts and/or disciplines.

Below in Figure 4.1 is a schematic from Schenk and Guittard (2009) which places crowdsourcing as a sub-set of outsourcing with a relationship with open source and open innovation and a commonality with user innovation.

**FIGURE 4.1**
Schematic from Schenk and Guittard (2009) representing the relationship between crowdsourcing and outsourcing, open source, open innovation and user innovation

Schenk and Guittard (2009) clarify that they view open source as an application field rather than a theoretical concept like crowdsourcing, outsourcing, open innovation and user innovation. This is why it is represented with a dotted line. Also their view is that
open source is restricted only to software development and crowdsourcing is much broader. Schenk and Guittard (2009) make efforts to differentiate crowdsourcing from open innovation by virtue of the fact that it is not open in the same sense open innovation is, instead it is narrower. For example, crowdsourcing firms use intellectual property rights in a more traditional sense such as patenting their output.

4.5.1 Open Innovation

In the past decade crowdsourcing has come to be considered by some scholars as a category of open innovation. Open innovation is defined as a type of innovation whereby firms access and exploit outside knowledge while liberating their own internal expertise for others’ use (Chesbrough, 2003). The practice of open innovation in firms has expanded hugely in the past decade (Lichtenthaler, 2011). Firms are discovering skills, ideas and, importantly, revenue streams that are garnered from seeking innovation outside the firm.

Crowdsourcing, as it is practised by crowdsourcing firms, has sometimes been placed by scholars in an open innovation framework (Chesbrough, 2011). This framework operates such that a firm’s research and development activities are increasingly becoming open to external expertise (Chesbrough, 2003; Chesbrough, 2006). This is in contrast to being closed - being traditionally conducted exclusively inside the firm. Modern communication networks, characterised by Web 2.0 processes, including crowdsourcing, are facilitating a shift more rapidly from closed to open innovation due to the ubiquity and widespread availability of such networks and then, in turn, through the collective and distributed intelligence disseminated in the crowd (Chanal & Carol-Fasan, 2010). Such fluid distributed intelligence gleaned through the collective output of the crowd is key to the crowdsourcing model’s unique value properties. For example, Afuah and Tucci (2012) establish that in some circumstances crowdsourcing transforms distant search into local search, improving the efficiency and effectiveness of problem solving. In this scenario a firm may choose to crowdsource problem solving rather than solve the problem internally.

However, there are many ways in which crowdsourcing does not comfortably fit into open innovation, for example, an artist recently used crowdsourcing company Mechanical Turk (owned by Amazon) to source multiple crowdsourced individual
contributions of 10,000 sketches of left facing sheep (Koblin, 2006). This individual creative project is clearly not open innovation as Chesbrough (2003) conceived it whereby a company seeks innovation outside its firm boundary as distinct from internal innovation such as its in-house research and development team. As mentioned earlier, crowdfunding, a related hybrid form of combining crowdsourcing with microfinance (Mollick, 2014), where organisations or individuals arrange (oftentimes philanthropic) funding donated by crowds, could not be considered to fit neatly inside the framework of open innovation either.

4.5.2 Open Source, Co-creation and User innovation

Open source is limited primarily to the field of software and crowdsourcing operates well beyond the field of software (Howe, 2008). Similarly, crowdsourcing may be, but is not necessarily, a form of user innovation, defined as where a firm’s users rather than producers are major sources of innovation which can result in innovation between a firm and its customers and/or suppliers (Von Hippel, 1976). It may or may not be co-creation where consumers interact with firms to co-create value (Prahalad & Ramaswamy, 2004). As an example, consider car-maker Volkswagen’s recent crowdsourcing venture to call for and extract innovative ideas regarding a new ‘people’s car project’ car design directly from the people of China – specifically the 450 million people in China who have access to the Internet (Park, 2012). Clearly Volkswagen in this case has issued an open call which goes well beyond its users - in terms of customers or suppliers and its potential co-creating direct consumers – although, in theory, some of the 119,000 crowd members who submitted car designs in the crowdsourcing contest could have been Volkswagen customers/users, but the majority would not have been users.

Crowdsourcing, rather than being swallowed into frameworks of open/user innovation or co-creation, may operate outside these frameworks on its own. For example crowdsourcing has been used as method of recruitment or as a convenient online locus of pooled collective intelligence. The workings of the crowd itself can confound these frameworks. The crowd may (fully or in part) or may not be considered a firm’s consumer in certain crowdsourcing contexts. The crowd can function as an employee in micro-tasking crowdsourcing settings, as a supplier when the crowd is being used to provide money in crowdfunding or as buyers/consumers when it functions
as a buying group in certain retail crowdsourcing settings as practised by companies like Threadless. Such nuances make the frameworks of user/open innovation and co-creation difficult to apply in all crowdsourcing settings.

While crowdsourcing could certainly take on the form of open innovation or co-creation, it could also potentially be a production line, a recruitment method or an efficient mode of economic exchange. Value for a firm could equally emanate from these alternative modes of utilising crowdsourcing. In addition, the crowd may (fully or in part) or may not be considered a firm’s consumer in certain crowdsourcing contexts, which makes the concept of co-creation difficult to apply in all crowdsourcing settings. Some crowds fulfil the role of producer (workforce) and also at times consumer in the same business cycle. Sometimes they are only either the producer (workforce) or the consumer.

So, crowdsourcing defies neat classification inside of established open/user innovation, open source and co-creation theoretical frameworks. This provides a basis for seeking to position and conceptualise it more broadly as a value creating strategy based on configuration of firm capabilities and resources or alternatively as an entity that fosters relationships based on mutual value creation or simply as a new business model to create value.

4.6 Collective Intelligence

Crowdsourcing has also been associated with the related phenomenon of collective intelligence. Collective intelligence is a particular social mechanism which may underpin crowdsourcing and is increasingly conceived as an important artefact of crowdsourcing which could benefit organisations practicing crowdsourcing. It is defined as individuals within a group doing things collectively that seem intelligent (Malone, 2006). The motivation for an organisation to develop capabilities via crowdsourced collective intelligence is best summarised by Malone, Laubacher & Dellarocas (2010, p.22): “More than inspiring…all it takes for a company to magically
divine market desires, create exactly what’s needed…and do it all at little or no cost. Come let the crowd get your work done for you – cheap, perfect, now”.

James Surowiecki (2004) in his book *The Wisdom of Crowds* elaborates on one of the key ideas behind the collective intelligence of crowds which is that significantly large groups of people are (in almost all circumstances) smarter than a brilliant individual or an elite small group. Surowiecki (2004) takes steps to prove that such sufficiently large crowds comprising people of ordinary intelligence/talent, in situations where their collective intelligence is harvested, are superior at problem-solving, innovation-raising, wise decision-making and future-predicting. Core to the notion of collective intelligence is that the crowd is wise, rational, benevolent and useful.

Interestingly, the Massachusetts Institute of Technology (MIT) has set up a relatively new *Center for Collective Intelligence* based on the fact that now, for the first time, new communication networks like the Internet allow large numbers of people globally to work in new ways together. The main research question, under which they operate, is: “How can people and computers be connected so that—collectively—they act more intelligently than any person, group, or computer has ever done before?” (Massachusetts Institute of Technology, 2014). They have formulated a new concept of the ‘global brain’ of which crowdsourcing is one critical element.

Collective intelligence, in some cases, is an artefact of crowdsourcing and in some cases may be the causal mechanism that makes it valuable. The crowdsourcing business model can harness the collective intelligence of the crowd of web users through an open-call format (Brabham, 2010). Malone, Laubacher and Dellarocas (2010, p. 22) label collective intelligence variously as ‘magic’, ‘powerful’, ‘cheap’, perfect’, ‘cool’ and ‘now’. They create building blocks or ‘genes’ for a collective intelligence business design system based on what (goal-directed), why (incentive-directed) and how (structure or process grounded) a firm’s work is being done and who (staffing) is doing it. These building blocks can be re-combined and re-organised to create an optimal system for any firm. This system, if successful, can potentially extend the applicability of collective intelligence use far beyond the manner in which it is being currently employed in firms.
Brabham (2010) makes a strong point that the addition of collective intelligence to the crowd means the firm utilising a crowdsourcing business model may benefit far beyond simple collaboration with users. The strength of the crowd lies in its composite or aggregate of ideas and with the addition of crowd wisdom, where groups have been found to be more intelligent than the most intelligent individuals that make up the group (Surowiecki, 2004; Woolley, Chabris, Pentland, Hashmi & Malone, 2010). In this light, it is interesting that some crowdsourcing websites such as Kaggle, which attract a so-called ‘genius’ crowd, might potentially produce hyper-intelligent results. If the collective brain-power of the pool of the crowd includes only that of high-intelligent and high-performing individuals the collective intelligence may theoretically produce a markedly superior result.

Collective intelligence has also been called ‘swarm intelligence’ in scientific disciplines and has been conceptually aligned with insect swarming in nature in terms of the ability of bees and ants to intelligently and productively self-organise, build, gather food, nurture offspring and make intelligent decisions such as deciding which bee is the next Queen-bee without any central direction (Gloor & Cooper, 2007; Milius, 2009). Researchers Gloor and Cooper (2007) tie in this biological construct to a business setting and set business principles for firms to tap collective intelligence in crowdsourcing business models. These principles include gaining power by counter-intuitively giving it away to the crowd, sharing with the crowd and concentrating on the crowd more and less on making money. Such principles point to the over-riding democracy inherent in the crowdsourcing system and are largely counter-intuitive to conventional business wisdom.

Milius (2009) makes an interesting point that the whole field of decision-making is being revolutionised by collective intelligence studies – the term she uses is ‘swarm savvy’. Milius (2009, p. 16) states:

*The biologists studying animal groups are finding strange lab fellows these days in economists, social scientists, even money market specialists. They are trading tales of humans and nonhuman animals to understand collective behaviour and what makes it go right or wrong.*
Beyond being studied in disciplines such as Economics and Social Science, the study of such collective intelligence behaviour might also fruitfully have a place in a Management discipline.

For example it may be possible to re-cast the example of Apple’s “App Store” with its millions of user-created ‘apps’ as an example of a Milius’ (2009) ‘swarm savvy’ style of crowdsourcing rather than simply a very large-scale third-party licensing arrangement. This is because it uses a large, undefined group of people, via an open call for ‘apps’, who work intelligently as a collective to create large numbers of useful web-based ‘apps’.

4.7 Academic conceptions of crowdsourcing

Academic conceptions of crowdsourcing are in their infancy. As Afuah and Tucci (2012, p.372) state: “the study of the fascinating phenomenon of crowdsourcing promises to be a rich source of theoretical and empirical knowledge and scholarly activity for many years to come.” The current view is that there has been little theorizing on crowdsourcing itself (Afuah & Tucci, 2013, p.458) as well as Bloodgood’s (2013) view researchers will now start to build up a research stream on crowdsourcing.

At this point, some academic conceptions of the business model of crowdsourcing portray that it has the potential to speed up internal processes, significantly lower business operational costs, reduce time to market as well as to open out and potentially revolutionise an organisation’s innovation landscape (Andriole, 2010; Sloane, 2011). As stated above, organisations can also potentially benefit from the harnessing of collective intelligence (Malone, Laubacher and Dellarocas, 2010). It is also potentially a good way for an organisation to make decisions, to engage customers, create new or improve products/services and to increase (or even diversify) its potential workforce dramatically. Chanal and Caron-Fasan (2010) see crowdsourcing as a means to create value for businesses. What is still emerging from scholarly work is how exactly is crowdsourcing practised inside crowdsourcing firms and how is the value predicted by Chanal and Caron-Fasan (2010) created?
Is crowdsourcing a business strategy featuring a unique interaction of resources and/or capabilities? Alternatively is it a business ecosystem or a structure, that is, a business model and part of a value-creating business activity architecture or system. Alternatively, is it simply a transaction exchange model which is used to create value? These questions point that how crowdsourcing is practised or used inside firms, as well as the elements of crowdsourcing which are most significant, is still not well understood. Clearly, case study research, which focuses on data collection tied to the field and provides rich, real-life insights, can be of tremendous value to understanding a phenomenon like crowdsourcing and its important elements and how it is practised in the field.

With this notion in mind, I conducted an ABI/Inform database search of full-text, peer reviewed academic journal articles which contained case studies related to crowdsourcing in November 2014. The search revealed that there were 257 articles containing case studies based on crowdsourcing commencing publication from 2007 onwards and which covered all subject disciplines. The subject disciplines to feature crowdsourcing case studies in the highest numbers were Technology Management, Information Systems, Management/Business, Geography and Policy.

Case studies based on crowdsourcing in Management and Business oriented studies only numbered 51 articles (a full list of these articles is at Appendix F). A deep examination of these 51 articles revealed that only a small number (six articles) contained specific and identifiable crowdsourcing-based case studies. Figure 4.2 below illustrates a simple schematic of the sifting process to uncover those articles which contained specific case studies pertaining purely to crowdsourcing:
FIGURE 4.2
Schematic of reduction of case study articles to those focussed purely on crowdsourcing

<table>
<thead>
<tr>
<th>Management and Business Studies case study articles involving crowdsourcing = 51 articles</th>
</tr>
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<tbody>
<tr>
<td>↓</td>
</tr>
<tr>
<td>Those articles with more than a fleeting mention of crowdsourcing = 28 articles</td>
</tr>
<tr>
<td>↓</td>
</tr>
<tr>
<td>Those articles with specific and identifiable crowdsourcing-based case studies = 6 articles</td>
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<tr>
<td>↓</td>
</tr>
<tr>
<td>Those crowdsourcing-based articles which contained one single case study only = 3 articles</td>
</tr>
<tr>
<td>↓</td>
</tr>
<tr>
<td>Those crowdsourcing-based articles with more than one case study = 3 articles</td>
</tr>
</tbody>
</table>

From the schematic in Figure 4.2, of the final remaining three articles were those that contained content clearly identifiable as crowdsourcing case studies and with more than a single case study featured.

One study (Antikainen, Makipaa & Ahonen, 2010) featuring three case studies in three countries provided findings pointing to intangible factors such as community cooperation, learning new ideas and being entertained were higher motivating factors than purely monetary rewards. This study however was limited to 17 qualitative survey returns and to some secondary internet documents.

Another grounded study of three cases (Ordanini, Miceli, Pizzeti & Purasuraman, 2011) focussed exclusively on crowdfunding rather than crowdsourcing. Its findings uncovered various purposes, characteristics and investment sizes pertaining to the crowdfunding intermediaries featured in the study. In the study consumers take on the role of investor which has implications for service theory.

A third study (Russo-Spena & Mele, 2012) examined crowdsourcing indirectly and focussed more directly upon co-creation. It used cases from 10 companies, although did not conduct interviews and, instead, examined company websites over 12 months and
online community activity through Internet-based observations. It provided a practice-based view of co-creation and integrated it with innovation research streams.

The three studies highlighted here represented the only studies out of 51 possible articles in management literature which made a more focused and detailed effort to examine the phenomenon of crowdsourcing itself in any sort of depth. These three studies were distinguished by placing crowdsourcing as the front and centre concept in the study and by trying to investigate using a qualitative focus as a study method.

However, there were major issues with each of the three studies, which diminished their impact as in-depth empirical studies focusing entirely on cases of firms which use crowdsourcing. The first study (Antikainen, Makipaa & Ahonen, 2010) relied primarily on only 17 qualitative returns (albeit with some online material) which calls into question the internal validity of the study. The second study was a grounded study of three cases by Ordanini, Miceli, Pizzeti and Purasuraman (2011) but it focussed only on crowdfunding rather than crowdsourcing - and again three cases only raises issues related to the internal validity of the study. The third crowdsourcing case study (Russo-Spena & Mele, 2012) employed no field methods and only secondary material was used to form its key conclusions.

The conclusion to be drawn here is that there have been almost no empirical case studies of crowdsourcing-centric firms yet undertaken employing field methods engendering highly reliable and valid triangulation of data. The case studies in existence have been operationalised with limited numbers of interviewees and/or have relied on limited secondary sources in data collection efforts – which have a cascading effect on the eventual analysis. The gap formed by these combined facts points to a dearth of quality case studies of crowdsourcing-centric firms. This study seeks to contribute to this gap in the literature by being the first in strategic and operations management fields to provide valid and reliable empirical data to help provide understanding toward operational elements of a reliably high number of crowdsourcing firms.

The overall conclusion from this search of scholarly articles covering crowdsourcing case studies is that there are very few scholarly case studies published in a Business/Management field which purely examine crowdsourcing practices inside those firms.
which wholly or mostly use crowdsourcing as their most significant revenue generator, activity system or business model.

In conclusion, the findings here relevant to the scope of the study include that there have been almost no empirical studies related to crowdsourcing centric firms in strategic and operations management disciplines. Ideas relating to what comprise crowdsourcing practices and how they are conceived and add value are still under-developed. The content of this chapter is used to directly justify a qualitative and exploratory inquiry related to crowdsourcing centric firms, their practices and value-adding promise.
5. LITERATURE REVIEW - PART 2–VALUE CREATION

The second part of the literature review presents the value creation potential of crowdsourcing. Following on from this, then I present the main value creation theoretical perspectives in the extant strategic management literature.

The final step is to evaluate and discuss the value creation theoretical implications of crowdsourcing against each of the traditional established theoretical perspectives.

5.7 Value Creation

Value creation is a key concept in strategic management and organisation literature, albeit not well understood, and scholars are prone to disagreements on what value creation is and how it is created (Lepak, Smith & Taylor, 2007). Given this uncertain environment there are indeed competing streams of literature in strategic management frameworks. There are also competing views on what value creation is and how exactly it is created. First, established economic and strategic management streams point to the configuration of firm resources and capabilities. A firm that has attained a competitive advantage has enhanced its value creation potential. Such value creation, in this context, is the difference between the benefits of a resource-capability combination and the economic cost to exploit them over rival firms (Peteraf & Barney, 2003). Beyond this, Newbert (2007) suggests that economic value is generally created by producing products and/or services with either greater benefits at the same cost compared to rival firms, termed differentiation-based competitive advantage or the same perceived benefits at lower cost compared to rival firms, termed efficiency-based competitive advantage. Such value is the ultimate product of firm heterogeneity.

However, such orthodox strategic management explanations for value creation from firm (resource and capability) heterogeneity in relation to competitors are being challenged. As Powell, Lovello & Fox (2011, p.1370) state:

*Existing theories are surprisingly parochial, explaining heterogeneity as Bainian market power protected by monopoly barriers, Penrosian resource advantages protected by factor scarcity, and Schumpeterian innovation driven by...*
entrepreneurship and technology. These are the three pillars of strategic management theory. Do these theories really explain firm heterogeneity?

In accordance with Amit and Zott (2001), traditional views in strategic management point out that value can be created through firm heterogeneity achieved via a myriad of firm-centric theoretical frameworks. Such frameworks include firm value creation achievement via Schumpeterian innovation (Schumpeter, 1943) and the configuration of the value chain and firm positioning (Porter, 1985). Their views extend also to network effects among firms (Gulati, Nohria & Zaheer, 2000) and transactional economic exchange efficiencies vital to the transaction cost economics (TCE) perspective (Williamson, 1985). They also examine value creation in relation to firm resource and capability frameworks such as the resource-based view where firm heterogeneity is achieved through resources characterized as valuable, rare, inimitable and non-substitutable (VRIN) (Barney, 1991) and the dynamic capability framework (DCV) focusing on re-configurations of firm resources and competences - incorporating dynamism (Teece & Pisano, 1994).

There are some more recently-developed value creation frameworks in addition to those outlined above. These seek to make the perspective of value creation more nuanced and sophisticated and to more thoroughly seek to understand what value is and who produces and receives it. The notion of firm heterogeneity and its role in value creation is still important, but the newer frameworks take a broader view than that of the entirely firm-centric view of the more traditional value creation frameworks in the strategic management field. Three recent examples of this more nuanced-perspective-centric view of value creation is the ‘multilevel’ perspective (Lepak et al., 2007), the ‘consumer’ perspective (Priem, 2007) and systemic perspectives of value creation such as the business model or the business ecosystem (Priem, Butler & Li, 2013; Zott, Amit & Massa, 2011).

The ‘multilevel’ perspective broadens the definition of exactly what value creation is by expanding Bowman and Ambrosini’s (2000) notion that value is defined by its either ‘use value’ from the perspective of consumers’ sense of performance or aesthetic quality of a good or service against their needs or ‘exchange’ value which is the monetary value of the good or service at the consumer/provider exchange level. The expansion of this ‘use’ and ‘exchange’ value is posited by Lepak et al. (2007) to include
multiple levels of analysis such as society versus organisations versus individuals and their relationships and inter-relationships as both the source and the target of value creation. They argue that, despite the definition of ‘use’ and ‘exchange’ value remaining constant across all levels of analysis, the process of value creation will be different if the creator of value is an individual, an organisation or society in general.

The ‘consumer’ (demand-side) perspective on value creation, developed by Priem (2007) and later by Priem, Butler and Li (2013) places the ‘downstream’ consumer as a critical arbiter of value, and sees that consumers experiencing (and paying for) benefits emanating from an ‘upstream’ firm are essential to any firm’s ultimate success. The consumer’s role in value creation, in Priem’s (2007) view, has often been ignored or minimised by more traditional firm/producer-centric value creation frameworks such as the RBV (Barney, 1991), the DCV (Teece & Pisano, 1994) the TCE (Williamson, 1985) and Porter’s (1985) value chain and firm positioning. Priem (2007) provides two reasons for the traditional dominance of the firm/producer-centricity of value creation frameworks in the strategic management field. Firstly, such firm/producer orientation has developed because the objective of strategic management is to create shareholder value which traditionally links directly with the firm/producer instead of the consumer. Secondly, industrialisation has caused the separation in space and time of producer and consumer. His view is that consumer benefit actually drives the revenue streams that make a company’s resources valuable, and oftentimes, the creation of consumer benefits link closely to value for shareholders.

Another more recent-comer to the value creation scholarship is that of the ‘holistic, systemic’ perspective of value creation, which use the examples of the business model and business ecosystems (Priem, Butler & Li, 2013; Zott, Amit & Massa, 2011). Both the business model and business ecosystems draw in a wider group of value-complementors to value creation than simple producer and/or consumer. For example in relation to business ecosystems, Kapoor and Lee (2013) posit that firms are part of a business ecosystem of interdependent activities which are carried out by their customers, complementors and suppliers and such interdependencies underlie firms’ ability to appropriate returns from investments. In terms of the business model, Zott, Amit and Massa (2011, p. 1037) state:
The business model promotes a dual focus on value creation and value capture...Even those business model scholars who tend to focus on how value is appropriated by the focal firm recognize that value is created through the focal firm in concert with exchange partners.

5.8 Crowdsourcing and value creation

Crowdsourcing, in its different forms and even in hybrid formations of these, has the potential to create value for businesses, and more especially for those businesses which use crowdsourcing in a specifically centric and existentialist manner, such as crowdsourcing firms whose revenue mostly derives from crowdsourcing activities. Kazman & Chen (2009) see crowdsourcing strategy leading to the creation of value specifically because it harnesses the creative energies of self-selecting participants with little or no financial compensation or formal managerial structure.

Value is created when firms develop or invent new ways of doing things using new methods, new technologies, and so, from an organisational perspective, innovation and invention activities impact the value creation process. As mentioned above, value may be captured by the use of resources with attributes that make them difficult to imitate, through the source’s use of creative destruction prior to competitors using the innovation, though methods of resource/ capabilities management, through network effects or firm positioning (Amit & Zott, 2001; Lepak et al., 2007; Priem, Butler & Li, 2013). In addition, value may be captured through the working together of complementors or other exchange partners or through consumers and producers interacting and exchanging value (Kapoor & Lee, 2013; Priem, Butler & Li, 2013; Zott, Amit & Massa, 2011).

Crowdsourcing has the potential to have a marked effect on value creation scholarship. Crowdsourcing may be seen as an efficient transactional economic exchange involving firms efficiently mediating between market forces of huge crowds and worldwide clients to achieve high speed results over high speed networks. Alternatively, crowdsourcing may be seen as a way of a firm organising rent-generating resources or exploiting workforce capabilities, in the form of large crowds of largely unpaid workers. Crowdsourcing may be seen as a highly innovative new way to
organise business or to build new products or to create new markets. Alternatively the working together of crowdsourcing firms with large crowds and clients could constitute a business ecosystem or indeed a new type of business model. In many cases crowdsourcing firms rely solely on their crowdsourcing participants for important firm capabilities such as decision-making, innovation or problem-solving (Afuah & Tucci, 2012).

5.8.1 Outside strategic management value creation concepts – Social framing
Beyond the traditional and newer conceptions of value creation in the strategic management field are other frameworks which may be important to consider. Is what makes crowdsourcing a unique phenomenon (and thereby valuable through the achievement of firm heterogeneity) the relationship between the firm and the crowd? Some of the value in crowdsourcing may also lie in social factors. For example what attracts crowds to crowdsourcing firms in such large numbers when oftentimes crowd members are never paid? Is there an element of affect between firm and crowd? Are concepts like fun and trust important in crowdsourcing and would crowdsourcing systems become more difficult to run if these elements were not present?

A study by Sun, Fang and Lim (2012) suggests that TCE is an inadequate theoretical basis alone to explain the motivation of all crowdsourcing participants to participate long-term simply based on financial transactional exchange factors. This means that, in some crowdsourcing transactions social and relational aspects become very important – particularly to the firm sustaining a relationship with its crowd for the longer term.

5.8.2 Framing Philosophy
Given the number of traditional and new value creation frameworks in the strategic management field as well as the potential value creation effects of social framing, as outlined above, I will attempt to frame how crowdsourcing may potentially fit with such frameworks and theories in the extant strategic management literature. I will also make efforts to examine a social framing outside the strategic management field in order to be thorough and open-minded.

This multi-path and open-minded approach is consistent with the guiding philosophy outlined at the commencement of this chapter, whereby I signaled an intention to use the literature to orient the study and to help build a general picture of the pre-existing
theoretical landscape without overly prejudicing the results emanating from the grounded data. I will present all main value creation theories in the extant strategic management literature so as to neither limit nor prejudice my framing in preparation for building data from grounded theory. These value creation theories will be analysed against the value creating potential of crowdsourcing. In doing so, I will also attempt to uncover gaps in each established theoretical framework in terms of how or where crowdsourcing does not fit or challenges the theoretical construct. Such a multi-framing approach has been used for other emerging topics, most notably by Amit and Zott (2001) in their study on value creation in e-business.

I will examine how the value from crowdsourcing can be viewed through the following lenses: Schumpeterian Innovation, TCE, resource-based view, dynamic capabilities, knowledge-based view, Porter’s value framework, network effects and business models. In addition to the value creation frameworks, a social framing will be utilised using Social Exchange Theory as well as Stakeholder Theory to analyse crowdsourcing and its value creating potential in relation to the firm-crowd relationship. Where it appears prima facie that a particular framework is likely to have limited applicability to the study, I will signal that the particular framework is expected to be downplayed in further work related to the study.

5.8.3 Schumpeterian Innovation

Clearly, the implication of firms failing to respond to changing market externalities can potentially be Schumpeterian obliteration - as described in Schumpeter’s theory of creative destruction (Schumpeter, 1943). This theory posited that the innovative transformation created by entrepreneurs engaged in introducing disruptive technologies sustained long-term economic growth and created wealth while it simultaneously destroyed the value of established dominant companies, not engaged in such innovation. A good example is to consider what crowdsourcing organisation Wikipedia - barely more than a decade old and with its 35 paid staff - has done to the 200 year old firm Encyclopaedia Britannica with its 400 paid staff – grown many times its size and almost decimated its business (Angelova, 2010; Wikipedia, 2012).
In relation to Schumpeter’s contribution to distinguishing types of innovation, Casadesus-Masanell and Zhu (2013) highlight the different types of innovation he framed, which includes: new products, new production methods, new supply sources, exploitation of new markets and new ways to organise business. These five types of innovation are individual sources of value creation and crowdsourcing has been used in a way to engage all these different types of innovation. For example Threadless, a firm reliant on crowdsourcing for submitting, choosing and buying new t-shirts has produced uniquely-designed t-shirts as a canvas for art and thereby created new products, they have also designed new production methods, new supply sources, exploited social media for new markets and by so doing has re-engineered a new way to organise t-shirt retail.

5.8.4 Transaction Cost Economics

Transaction Cost Economics (TCE) posits that firms’ and markets’ exchange governance is driven by the desire to minimize the direct and opportunity costs of economic exchange, known as “transaction costs” (Williamson 1985). The firm, guided by its goal of transaction cost minimisation, helps explain why firms use certain exchange relationship governance tools (Lambe, Wittmann & Spekman, 2001).

In the type of crowdsourcing described as ‘Tournament-based’ (Afuah & Tucci, 2012) crowdsourcing participants compete for a winner-takes-all prize. The transaction cost minimisation of this contest style crowdsourcing is great considering that each client avails themselves of many person hours of work for what is usually a superior result as a consequence of the combined efforts of the crowd (Shapiro, 2011). The cost in the form of prize-money the client offers in most cases is far less than if they had employed staff, agents or contractors to complete the task (Simonson & Brahma, 2011).

In addition, the lack of formal employment contracts and of formal workplace relations allows crowdsourcing exchange parties to largely eschew traditional contracting costs. The approach adopted by the crowdsourcing firm 99Designs of having an over-arching, simple, generic, rules-based agreement does lower transaction costs to the extent that the Internet allows very efficient matching of employee and
employers and allows for a relatively low-cost and high volume of transactions – a huge paradigm shift in work, production and employer-employee exchange (Felstiner, 2010). This in turn creates firm value through lowering firm transaction costs, because no individual contract is required and crowdsourced labour can continue to work at relatively low cost for agents on single task transactions. As well, due to the nature of the task-specific, on-demand labor that offers the efficiency of 100 percent (task-based) utilisation, industry reports estimate an additional saving of 10 to 15 percent on each labour transaction in comparison to traditional transaction regimens (Simonson & Brahma, 2011).

5.8.5 Resource-based view of the firm
Established economic and strategic management streams point to the configuration of firm resources and capabilities. A firm that has attained a competitive advantage has enhanced its value creation potential. Such value creation is the difference between the benefits of a resource-capability combination and the economic cost to exploit them over rival firms (Peteraf & Barney, 2003).

Such firm heterogeneity is a hallmark of the resource-based view of the firm, which establishes that firm heterogeneity is largely based on a firm’s unique bundle of resources and capabilities which create value. Organisation value and hence competitive advantage can be created by an organisation via monopoly rents in an exclusive, unique or protected market environment, or via Ricardian rents by virtue of firm resources which are valuable, rare, inimitable and non-substitutable (VRIN) – a key concept in the resource-based view (RBV) (Barney, 1991; Makadok, 2001; Wernerfelt, 1984).

The VRIN concept in the RBV when applied to crowdsourcing can vest in the crowd - the formation of which may be viewed as a unique resource. Only in relatively recent history have firms been able to advantage themselves of relatively cheap, high speed computer networks which now allow unprecedented access to scaled-up, millions-strong workforces, crowd-based production, crowd intelligence, crowd-generated monetary exchange (known as crowdfunding) and crowd ideas.
Crowdsourcing firm Kaggle – a near monopoly in its specific field of endeavor – attracts and retains its key resource which is a highly valuable, rare, difficult to imitate or substitute niche crowd of over 267,000 data scientists (with a large proportion of PhD level participants). This data-science-heavy crowd comprises experts from quantitative fields such as computer science, statistics, econometrics, maths and physics sourced from over 100 countries and 200 universities (Kaggle, 2015).

5.8.6 Dynamic Capabilities

The Dynamic Capabilities View (DCV) which was originally constructed by Teece and Pisano (1994) and focuses on a firm’s strategically-assembled dynamic internal capabilities which when bundled optimally can foster new and valuable products/processes creation while being ever-mindful of changing market circumstances. The theoretical construct of the DCV helps to specifically address the question of how firms can cope with changing environments, systematically solve problems, sense opportunities and threats to its business and to make timely and market-sensitive decisions to alter its resource base (Barreto, 2010). The DCV establishes that a firm must create and sustain competitive advantage via VRIN through bundling internal capabilities to manage firm resources while accounting for the dynamism of the market to avoid an untimely Schumpeterian demise.

Strategic management scholars have generally regarded resources and capabilities as separate entities in the creation of economic rents – although they may work in concert. Makadok (2001) speaks of the individual element or the combination of both strategic resource-picking (RBV) and capability-building (DCV) in terms of how firms create superior economic rents or competitive advantage. His view of resource-picking is seen in terms of a firm ‘purchasing’ and ‘acquiring good resources’ (Makadok, 2001, p. 388). Traditionally, for example, a firm must ‘purchase’ its human resources by offering salary/contract payments or by setting up ‘purchased’ third-party suppliers of human capital.

Crowdsourcing recasts the organisation’s role in resource-picking to make it a degree more complex than simple acquisition. The act of organisations ‘resource-picking’ in crowdsourcing scenarios is often more aptly termed resource-attracting, resource-
motivating or perhaps resource-inspiring and this is achieved through a variety of means including positive brand appeal, trust-sharing, community-building, cash incentives, fame-potential, altruism/philanthropy-appeal, career-development, reputation-building or pleasure-appeal (Brabham, 2010; Dellarocas, 2010).

5.8.7 Business Models

Another emerging stream of literature concerned with value creation focuses on the business model. Casadeus-Masanell and Ricart (2010, p.197) state: “a business model is about how an organisation earns money by addressing these two fundamental issues – how it identifies and creates value for customers, and how it captures some of this value as its profit in the process.”

As mentioned earlier, strategic management literature has been bolstered more recently by the addition of more holistic viewpoints related to value creation including combining ‘upstream’ firm-focussed producer value creation with ‘downstream’ consumer-focussed value creation, where end-point consumers are also arbiters of value (Priem, 2007). Priem, Butler and Li (2013) went on to develop the notion of systems of holistic value creation encompassing business ecosystems or business models.

Business models have been posited as the ‘architecture’ of value creation (Teece, 2010). The business model literature emphasises that the business model is a more holistic and broader-reaching concept than single theory concepts like the RBV and DCV. Amit and Zott (2001) conclude that e-business models cannot be defined by or explained completely by single theories or even combinations of those. For example, they examined Schumpeterian innovation, the RBV, dynamic capabilities, transaction cost economics, strategic networks and value chain analysis and concluded that while each explains pieces, none fully explain business model operation.

Crowdsourcing may be seen as a phenomenon which fosters the value-increasing creation of higher order capabilities and resource acquisition in firms or as a value-creating relational element of social exchange theory in a market but equally it may be seen as a value-creating strategic embodiment of firm architecture or structure represented by the business model. Organisation structure is increasingly perceived as an important element in accounting for differences in organisation performance and can
be a potential source of competitive advantage (Christensen, 2001; Richardson, 2008). Such organisation structure has recently been represented by the business model adopted by the organisation and established as a significant contingent factor in organisation performance (Zott & Amit, 2008). The business model is defined as a ‘structural template that describes the organization of the focal firm’s transactions with all of its external constituents’ (Zott & Amit, 2008, p. 1). It is seen as a potential vehicle for the realisation of economic value and the further creation of competitive advantage (Chesbrough & Rosenbloom, 2002; Morris, Schindehutte & Allen, 2005). In terms of an organisation’s management of strategy, the business model has recently come to be described as “a reflection of the firm’s realized strategy” (Casadeus-Masanell & Ricart, 2010, p.195). Richardson (2008) posits that the business model is a conceptual framework that helps link the strategy of the firm – or theory of how to compete – to its business activities. Trompette, Chanal & Pelissier (2008, p.3) remark that: “crowdsourcing conveys new patterns of arrangements to organise, co-ordinate and control economic activities”. Similarly, Google CEO, Eric Schmidt sees crowdsourcing as a way to harness new modes of production in order to take innovation and wealth creation to new levels (Tapscott & Williams, 2006).

Some of the scholars writing about crowdsourcing associate it as a business model (Andriole, 2010; Annibell, 2010; Chanal & Caron-Fasan, 2010; Euchner, 2010, Favaro & Pfleeger, 2011). In addition the findings from both scholarly and practitioner sources outlined in the prequel phase of this study place the ‘business model’ at the top of all references attempting to describe or define crowdsourcing.

However, there has been little in the way of focused field research in relation to crowdsourcing business models, how they are operationalised and how they work. This represents a gap in current research. Scholars have attempted to break the business model into components including value proposition, customer, internal competencies, key processes and key resources as well as an economic model/profit formula (Johnson, Christensen & Kagermann, 2008; Morris et al., 2005; Osterwalder, Pigneur & Tucci, 2005).

Academic scholars, it seems, are laggards in theorizing about new business phenomena and more distant than ever from influencing practice (Corley & Gioia,
A recent review of the business model revealed that much of the associated literature is less than a decade old and only a few academic contributions to the business model have appeared in top journals (Zott, Amit & Massa, 2011). Furthermore, Casadeus-Masanell and Ricart (2010) make the point that while real-life managers must understand how good business models work to ensure thriving businesses, the academic community has only offered the earliest of insights coupled with a lack of agreement on important concepts of business models.

5.8.8 Knowledge-based view of the firm

Strategy researchers, in tandem with the resource-based view, have also included the knowledge-based view as they look inwards to the firm/producer for sources of competitive advantage and value creation (Felin & Hesterly, 2007; Kang, Morris & Snell, 2007). According to March (1991) firms can create value by means of exploratory learning which involves harnessing knowledge outside the firm to create new consumer value. This complements Schumpeter’s (1961) view that value is created by the firm by means of it continually refining and improving existing knowledge stocks. Kang, Morris and Snell (2007) further elaborate that affective relations across firm boundaries which are leveraged through social exchange processes such as trust can have a marked and enduring effect on the nature of knowledge exchange in the relationship outside firm boundaries with key stakeholders. Their view is that value creation, in particular the value derived from the value of firm and stakeholder relationships, may be compromised if these associated parties do not trust one another and/or are unwilling to share knowledge.

The heart of the matter with regard to the knowledge-based view and its relationship to crowdsourcing is neatly summarised by Grant (1997, p.452): “The greater the span of knowledge being integrated and the more sophisticated the integration mechanisms, the more difficult is it for any potential rival to accomplish replication”. Arend, Patel and Park (2014) clarify that the knowledge-based view is the most strategically important firm resource. They also posit that, echoing the resource-based view, the core idea behind the knowledge-based view is the rarer and more valuable a firm’s knowledge is, the better its performance.
Crowdsourcing firms reach out across firm boundaries to the crowd to harness knowledge which is valuable to the firm and to the users of crowdsourcing. Such a view is amplified by Chesbrough (2011, pp. xviii-xix):

*Useful knowledge is widely distributed around the world. No one has a monopoly on that knowledge. Once you accept that, you must face the question of how best to access the wealth of knowledge around the globe. Crowdsourcing is an answer to that question.*

For crowdsourcing firms and for their clients, the valuable knowledge can be created almost entirely outside the firm by means of the crowd. One crowdsourcing firm in existence, namely Kaggle, even used the moniker ‘crowdsourcing for geniuses’ to create a public view that the company highly valued the knowledge input of its ‘genius’ crowd. Such ‘genius’ crowd was likewise highly valued by the firm’s clients – many of whom had solved intractable and difficult problems through the ‘genius’ crowd competitions run by the firm on behalf of third party clients.

However, despite being a potential theoretical basis upon which to develop the value creation potential in crowdsourcing, the knowledge-based view was considered weaker than its foundational forebear, the resource-based view, and also a weaker candidate than the dynamic capabilities framework. This is because knowledge-generation is not always the central concern of crowdsourcing firms, especially those with a bent towards goods production. For this reason, it has not been further utilised as a theoretical basis for examining value creation in crowdsourcing in this study.

**5.8.9 Porter’s value framework**

Value creation in Porter’s (1985) value chain framework is addressed through a focus on what activities a firm should perform and the configuration of those activities to add value and allow the firm to compete within its industry with value having the potential to be created along every part of the value chain to lower cost or raise performance for buyers (Amit & Zott, 2001). More recently, Porter (2001) has updated his framework to account for the Internet and how economic value is created. His two drivers of value creation for Internet-based industry include industry structure determining the profitability of the average competitor and sustainable competitive advantage allowing a company to outperform the average competitor. He views these two drivers as being universal and only applicable to individual industries and
individual companies, with the Internet’s inevitable ubiquity leading to no particular advantage for any player over time. In Porter’s (2001) view value and sustained competitive advantage will arise from unique products, proprietary content, distinct firm activities, higher product knowledge and superior service relationships. In terms of industry structure, superior value will be derived where traditional activities and approaches are creatively combined and reconfigured to suit newer Internet modes of conducting business (Porter, 2001).

Consistent with Porter’s (2001) view crowdsourcing can and does allow businesses to create unique products via open calls evidenced by the many new products created by Innocentive’s tournament-based approach to new product ideation and subsequent creation. Crowdsourcing allows proprietary content to flourish as in the case of crowdsourcing firm Kaggle’s to-date more than 200 data science contests which have seen the contest host – the client – award prizes in exchange for the intellectual property behind the winning data models including among others the unique ‘mapping of dark matter in the universe’ (Kaggle, 2013). Crowdsourcing fosters distinct activities with many crowdsourcing firms now moving to distinct niche markets and industries such as 99Designs domination of the online design contest market.

Crowdsourcing can foster superior product knowledge through close customer tailoring and/or pre-sumerism where crowdsourcing firms like Chaordix efficiently tap into crowds of online communities of passionate consumers and seek expert user views on products of interest for product-producing clients. Crowdsourcing firms have moved to develop superior service relationships through a combination of speed of delivery as Internet networks have exponentially gained in speed, size and reach, superior supplier tie-in, granular consumer tailoring, greater levels of consumer choice in particular through tournament-based crowdsourcing and through fostering trust relationships through continually motivating and retaining online crowds.

Porter’s (2001) view of industry structure encompasses the notion of extracting superior value through combining and re-purposing or re-configuring so-called ‘bricks and clicks’ structures. Some crowdsourcing firms have already reversed the usual trend
of ‘bricks’ then ‘clicks’ which pre-supposes that a business exists in physical ‘bricks’ form prior to virtual ‘clicks’ form. An example of this is Threadless which started online (‘clicks’) in 2000 and opened its first Threadless shop (‘bricks’) in Chicago in 2007. This means that crowdsourcing firm Threadless is deriving value from a creative and well-executed move from a ‘clicks’-only environment to a combination of ‘bricks’ and ‘clicks’ – a reverse of the way Porter (2001) originally conceived such a move.

Kim, Nam and Stimpert (2004) counter Porter’s view that sustainable competitive advantage as indicated by a firm’s profitability is a key value indicator. They posit that indicators like site stickiness, site popularity and click-throughs are unique online value indicators ignored by Porter. Garbi (2002) also counters Porter’s views on the traditional firm value indicators of shareholder value and profitability by positing a view that the non-traditional firm value indicator such as numbers of ‘unique site visitors’ – a unique online value indicator - fostered higher levels of value creation and growth for online businesses. As an example, crowdsourcing firm 99Designs has an online crowd of 850,000 translating to a huge number of unique site visitors daily and, in addition has run 379,469 design contests and has paid out more than USD $80 million, contributing to its own site stickiness, popularity and click-throughs and therefore potentially contributing to firm value (99Designs, 2014).

Despite having some strengths in terms of value creation generation related to crowdsourcing firms, Porter’s value framework was not considered a strong contender in this study as a theoretical basis for value creation. This was due mostly to the fact that value chains are difficult to substantiate given the vague, nebulous and unstructured form of the crowd in crowdsourcing businesses. For this reason, Porter’s value framework was not further examined in-depth as a basis for value creation in this study.

5.8.10 Network effects
The notion of strategic networks was developed during the latter part of the twentieth century and envisaged a world where value was derived by firms which were embedded in social, professional and exchange relationship networks (Gulati, Nohria & Zaneer, 2000). The concept of strategic networks in the received literature has given rise more
recently to related concepts of network effects and network status and what circumstances dictate how such networks can provide value which can be derived by both network users and providers (Afuah, 2013). Network status is determined by the positioning centrality of a firm in relation to other competing firms in the same industry (Jensen, 2003; Milanov & Shepherd, 2013).

Network effects occur when benefits arise not just from consumers’ use of the product or service per se but also based on those same consumers’ access to a compatible network of people using the product or service or complementary ones (Afuah, 2013; Gandal, 1994; Katz & Shapiro, 1985). Indeed network effects are perceived as strategic resources which can generate economic rents and thereby provide value (Shankar & Bayus, 2003). For example, crowdsourcing firm CrowdFlower (2014) with its 50 paid staff claims to manage the world’s biggest workforce at over 4 million and offers clients access to literally ‘millions of people’. There is no doubt that the relative size of CrowdFlower associated with its rivals is incomparable and thereby value is derived via its sheer size together with the careful management of such a network through an innovative blend of technology and management capabilities and also via network status, centrality and conduct. Value is derived by the firm (network owners) in terms of economic rent generation, size growth and market domination. Clients (network users) derive value through the ability to rapidly scale up or down in terms of the size of the available workforce.

In terms of crowdsourcing, the network effect concerning the size of the network can also have a bearing on how well the valuable artifacts of crowdsourcing like collective intelligence can be beneficial. Surowiecki (2004) believed that too small a crowd would offer too little diversity and too much consensus and that bigger crowds have the benefit of generating collective wisdom by means of diversity and independence. This is because, in his view, disagreement and contest not consensus and compromise make for superior collective intelligence value. In terms of the value of collective intelligence, some new research work is being done by the Massachusetts Institute of Technology (MIT) in their recently established Center for Collective Intelligence (the Center) including a recent empirical research study which helped support the notion that ‘we is better than me’ in terms of problem-solving and task achievement (Woolley et al.,
The Center has been examining ‘collectively intelligent’ crowdsourcing in terms of a variety of issues such as climate change, negotiation, data prediction, organisational behaviour and crowdsourcing systems. To derive value from crowdsourcing-sponsored collective intelligence there must be a critical mass of crowd participants coupled with the firm’s strategic intent to both harness and then benefit from the collectively intelligent crowd output and then to knowledge share such output (Soh, 2010).

Network status focuses on the centrality of a firm’s network in relation to its direct industry competitors by shaping the availability of payments, resources and opportunities to a firm, facilitating new market entry and ultimately enhancing organisational performance (Milanov & Shepherd, 2013). Crowdsourcing firms are increasingly appearing in niche markets and dominating them through sheer available crowd size, pooled expertise and in many cases volunteer or very cheap labour costs and through these factors having a network status effect.

Afuah’s (2013) view that value is derived for network members and providers through not just the size of the network but also through elements of social network theory like network structural holes and network member centrality and ties as well as the influences of transactional feasibility, the number of roles available to each network member, the levels of opportunistic behaviour, reputation of members and the trust perception. Afuah’s (2013) view is that network structure with elements like network member numbers, their inter-relationships and their characteristics combined with network conduct elements like the network’s opportunistic behaviour levels, the reputation of members and levels of trust are all important to and impact the value creation of a network.

While in many crowdsourcing firms members have no motivation to interact with each other, in some cases they do. For example, crowdsourcing firm Kaggle (2015) encourages (small) team formation of its crowd members in order to solve the difficult data problems set forward by Kaggle’s client firms. The incentive for the members of the team is that they believe that the team can out-perform individual effort on particularly elite problem-solving tasks and provide a better chance of winning the
crowdsourcing tournament and hence the associated prize-money (in some cases many millions of dollars) set forward by Kaggle’s client firms. Value is derived by crowd network members by creating a superior chance of success at solving elite data science problems and winning associated prize-monies. Value is derived by network clients by having elite data problems solved quickly, efficiently and in some cases more cheaply than alternatives. Value is derived by the network owner (Kaggle) via economic rents generated against rival firms and through organic growth generated by ever-increasing crowd size attracted by high levels of prize money and the ability to work on elite data science problems not found easily elsewhere.

In terms of network conduct, crowdsourcing has the potential for opportunistic behaviour among members of a crowd, however such behaviour is often self-regulated to minimise it. Crowdsourcing firm 99Designs requests network crowd members not to submit to network clients replicas of pre-existing designs which would impinge on another designer’s copyright or intellectual property rights. When this opportunistic behaviour occasionally happens, in many cases, other network members observe and report such infringements to the network owner – who may be unaware of the infringement due to the sheer size of incoming designs which equates to one every five seconds (Startup Daily, 2012).

Despite outlining some potential for the value creation potential of network effects in relation to crowdsourcing, it was not considered a strong theoretical contender in this study. This was chiefly due to the somewhat random, free-wheeling and amorphous nature of the crowd which makes determining the exact nature of the network effect and from where and how exactly value emanated through and by the network. For this reason, network effects were not further examined in-depth as a basis for value creation in this study.

5.8.11 Social Exchange Theory

Social exchange theory (SET) is seen as a highly influential conceptual paradigm in organisational behaviour (Cropanzano & Mitchell, 2005). SET has its roots in transaction cost economics (TCE) whereby firms and markets exchange governance is
driven by firms’ desire to minimise the direct and opportunity costs of economic exchange, known as “transaction costs” (Williamson 1985). The firm, guided by its goal of transaction cost minimisation, helps explain why firms choose to use certain exchange relationship governance mechanisms (Lambe, Wittmann & Spekman, 2001). Social exchange theory provides a basis for value-enhancing behavioural relationships in exchange relationships which rely primarily on establishing relational solidarity, flexibility and mutual trust in contrast to transactional cost economics which characterises economic transactions as primarily self-serving and opportunistic by the principal (Lado, Dant & Tekleab, 2008; Williamson, 1985).

However, crowdsourcing presents problems for TCE in terms of how transactions are conducted because oftentimes the legal and industrial relations environment is not settled, the exchange often simultaneously crosses country borders, legal systems and workplace relation systems and laws. Also the nature of the exchange ‘contract’ between firm and the crowdsourcing participant is not consistent, sometimes mediated and often ephemeral (Felstiner, 2010).

The approach where huge volumes of independent contracts would make transaction costs prohibitive means that crowdsourcing in these types of instance would not be economically viable under the rules of TCE. However, the use of loose, generic rules in the place of formal contracts and in the stead of formal workplace relations allows crowdsourcing exchange parties to largely eschew traditional contracting costs. The approach adopted by most of the firms in the study publish an over-arching, simple, generic, rules-based agreement which does effectively lower transaction costs to the extent that the (post-Web 2.0) Internet allows very efficient matching of employee and employers and allows for a relatively low-cost and high volume of transactions – a huge paradigm shift in work, production and employer-employee exchange (Felstiner, 2010). This in turn creates firm value through lowering firm transaction costs, because no individual contract is required and independent contractors can continue to work for ‘pennies’ for agents on single task transactions.
Koza and Dant (2007) measure successful working relationships via relational norms which include elements of relational mutuality (acting for mutual good), solidarity (sense of unity) and flexibility (coping with change). To exemplify this crowdsourcing firm Threadless attracts 300 crowdsourcing participants a day in terms of t-shirt design submission and thousands of volunteers voting on the best t-shirts to determine the firm’s production run (Threadless, 2012). Threadless firm’s appeal to its crowdsourcing participants includes terms like “We like you. You should like us..” (mutuality) (Threadless, 2012). It has a section on its website called ‘community’ devoted to its fan-base and personalising it with lists of fan birthdays for example (solidarity). It has a frequently updated blog notifying of changes, competitions, what staff are doing and highlighting newest designs and publishing user feedback (coping with change).

Therefore, crowdsourcing in many cases showcases *prima facie* social and interpersonal relational elements – so-called ‘heroic man’ elements - in the exchange system, where reciprocal relational elements like mutuality, solidarity and flexibility are featured. In terms of value creation, the network members in firms like Threadless are clearly helping create value for these companies through their participation and input and Threadless is deriving value through increased economic rents in comparison to its nearest rivals (Chafkin, 2008).

Sun, Fang and Lim (2012) posit that some crowdsourcing fosters the movement of social-based virtual communities to transaction-based virtual communities because where in the social-based virtual communities’ knowledge is viewed as a public good and is free so generates no economic value, in instances of crowdsourcing competitions the knowledge becomes a source of economic value and successful participants are paid. Their findings highlight that crowdsourcing participants would be sustained to continue participating not just by transactional monetary rewards but by the crowdsourcing firms leveraging intrinsic motivation through continuing to seek to increase task complexity and offering recognition for those participating in Tournament-based crowdsourcing who came in close to winning the competition but were not rewarded with money. In addition, Bogers and West (2012) suggest online participants
may gain status and reciprocity benefits from belonging to a community and donating their contributions to it. Frey, Luthje and Haag (2011) confirm that motivation of users to participate in crowdsourcing scenarios go beyond financial motivation alone and also include seeking fun, striving for status, reputation-building and social motivations invoking altruism or the desire to find friends or help a community.

Social exchange theory provides a basis for value-enhancing behavioural relationships in exchange relationships which rely primarily on establishing relational solidarity, flexibility and mutual trust in contrast to TCE which characterises economic transactions as primarily self-serving and opportunistic by the principal (Lado, Dant & Tekleab, 2008; Williamson, 1985). Lado et al. (2008) point to the dichotomy in the literature of so-called ‘economic man’ versus ‘heroic man’ where economic man - belonging to TCE - emphasises ethics relating to rational, cost-benefit calculation and heroic man - belonging to SET - emphasises the non-rational and non-calculative elements of the exchange system. Leonidou, Katsikeas and Hadjimarcou (2002) posit the exchange processes between parties exist in an emotional context or atmosphere and not in a vacuum.

Reciprocity is a key concept in SET, with a major type being reciprocity as a transactional pattern of interdependent exchanges (Cropanzano & Mitchell, 2005). So in terms of reciprocity, the crowd itself would also appear in some cases to feel attraction to the firm or perhaps to the crowdsourcing projects in particular or other related benefits. A crowdsourcing firm, 99 Designs, for example, attracts artists who often receive little financial compensation for their work but are showcased as artists which helps them client-build through this avenue provided by the firm.

Cropanzano and Mitchell (2005) also found that there seemed to be little to no effect of wage on the quality of work obtained which would appear to obfuscate the logic demanded by the rational TCE’s ‘economic man’. In addition to this the majority of crowd members included that they engaged in the crowdsourcing activity because the tasks are ‘fun’, introducing the idea that there might be elements of affect in some of the transactions. This again emphasises the notion of Leonidou et al. (2002) that the exchange system does not happen in a vacuum – that there are indeed emotional elements to it.
While the theoretical insights from social exchange theory and the expression of trust relationships and reciprocation might be a fruitful consideration in some crowdsourcing contexts in relation to value creation, it is not considered a central concern in this study. The social exchange and trust relationships between the crowd and the firm are not a critical focus in this study for the creation of value and such a focus may limit a wider and more holistic set of findings related to value creation, such as the role clients play and how the rapid scaling up and down of millions of crowd members creates value.

5.8.12 Stakeholder Theory and Fairness

A final framework is that of Stakeholder Theory which may have influence over value creation is in terms of how firms could or should create a fair and just environment in order to create value for their stakeholders. Stakeholder theory posits that other groups outside the firm such as employees, customers and supply chain stakeholders are important in firm performance and ultimately firm value creation (Donaldson & Dunfee, 1994).

Stakeholder theory may be useful for examining relationships between crowd and firm in crowdsourcing firms based on fairness and how such just relations can create value. Firms can increase firm performance through treating their stakeholders fairly (Donaldson & Preston, 1995; Harrison, Bosse & Phillips, 2010).

Bridoux and Stoelhorst (2014) present empirical evidence that provides a more sophisticated finding in relation to whether fairness approach to stakeholder management can lead to sustained value creation. They found that where stakeholders consider fairness important, that is they care about fairness, that such a fairness approach in stakeholder management will help attract, retain and motivate reciprocal stakeholders to create value.

In terms of crowdsourcing, such a fairness approach may be an important factor in crowdsourcing firms’ efforts at the attraction and retention of crowd members, who will willingly reciprocate fairness which will lead to better overall value creation.

It is still emerging what motivates the crowd to continue to contribute for crowdsourcing firms when the chance of reaping substantial financial or supplementary
reward is not generally high. Mason and Suri (2011) examined crowdsourcing relationships in a low task complexity, high volume and low (or no) pay environment characterised in crowdsourcing. They found that if an individual paying for work in such crowdsourcing firms is viewed as ‘unfair’ by participants in the transaction such an individual will (not surprisingly) have difficulty recruiting crowd contributors in the future.

While this might be an important consideration in some crowdsourcing contexts, stakeholder theory is not considered a strong contender as a basis for crowdsourcing and value creation in this study. The relationships between the crowd and the firm are not the central consideration in this study because wider groups of stakeholders are considered such as clients and systemic frameworks are taken into consideration.

5.9 Conclusion
One of the overall aims of this study is to examine crowdsourcing in terms of its value creation potential. Therefore both orthodox and newer value creation theories have been utilised in this chapter to examine crowdsourcing. Some orthodox theories have been considered in terms of how they relate to crowdsourcing but eliminated from further consideration in the thesis because these apply in a diminished capacity when compared to the remaining considered theories. These eliminated theories include knowledge-based view of the firm, Porter’s value framework, network effects, social exchange theory and stakeholder theory.
6. RESEARCH METHODOLOGY

6.1 Introduction

This chapter highlights the research methodology, design and justification for the methodology chosen. Vargas-Hernandez, DeLeon-Aria and Valdez-Zepeda (2011) define a research methodology as the manner in which data is collected, analysed and interpreted and signal that it defines the research purposes, activities, procedures, measurements and applications. Bettis, Gambaradella, Helfat and Mitchell (2014, p. 949) state: “the methods employed should neither constrain nor determine the questions asked”. In keeping with the above sentiment, the research questions in this study require methods which are consistent with the open, grounded and exploratory nature of the research and the research questions.

This chapter is structured by restating the research problem identified in earlier chapter and placing at the beginning a discussion of the philosophical approach, namely the ontological and epistemological approach and how it is placed in the strategic management field.

The next section contains a justification for the research methodology and the use of case studies in particular. The structure follows with sections covering details on the research design including research setting, question formation and units of analysis employed in the study. Following this is case selection and sampling issues.

The final sections cover data sources, the research context, data analysis, data quality and rigor as well as ethics.

6.2 The Research Problem

The objective of this study is to gain an understanding of crowdsourcing as a phenomenon and how it creates value. Since the phenomenon in its modern form is new and developing, and due to the fact that crowdsourcing firms are relatively new entities in business, the research questions are constructed to reflect this reality. Uncovering a
new type of phenomenon leads to a qualitative, inductive approach being a good fit (Siggelkow, 2007). Therefore open-ended research questions restated below will guide the thesis:

RQ1: How is crowdsourcing practised and conceptually characterised in terms of essential features in crowdsourcing-centric firms?

RQ2: How does crowdsourcing create value for the key participants in crowdsourcing transactions?

6.3 Philosophy of research approach

Suddaby (2006) makes it clear that any researcher must be clear about the epistemological and ontological issues surrounding grounded theory methods. In terms of epistemology this research project is positivist-oriented. In this study, this leads to the ontological assumption that reality exists independent of the researcher’s own socially constructed world view and can be studied objectively. This study fits with Gephert’s (2004) view of positivism and post-positivism in that reality is objective and the goal is to discover the truth. This study will use contextually rich data from defined real-world settings to investigate a focused phenomenon (Barratt, Choi & Li, 2011).

In this study it is assumed that the phenomenon of crowdsourcing as it works in businesses and the value creation processes adopted by firms and the associated role of managers is real and exists regardless of any consciousness. Reality in this study will be observed.

The positivist/objectivist philosophy will be underpinned by the intention of the study to extend theory. This intention, combined with a close and disciplined adherence to the qualitative data collected, will assist in maintaining objectivity (Eisenhardt & Graebner, 2007).

Qualitative theory building research, in particular research using case studies, addresses the “how” in unexplored research areas very well (Anteby, Lifshitz & Tushman, 2014; Eisenhardt & Graebner, 2007). Priem and Butler (2001) highlight the problem in the strategic management discipline of the failure to understand many
critical aspects of the example of the resource-based view which they see as being due in part to the prescriptive nature of the strategy discipline and a general failure of strategic management scholars to answer the ‘how’ questions related to the RBV.

6.4 Justification for use of the research methodology

The research questions, as restated above in section 6.2, were formulated in response to a formal literature review and a preliminary impression-raising exercise that functioned as a prequel stage. The study is qualitative, exploratory, theory-generating and inductive which is justified in the following points below:

6.4.1 The topic is nascent

Qualitative studies are most typically used for exploring an area sparsely or not previously studied (Barratt, Choi & Li, 2011). Scholarly literature has barely begun to explore crowdsourcing as highlighted in the prequel phase chapter earlier in the thesis.

The study is exploratory in character due to the nascence of the phenomenon and the fact that as a result ultimately inductive qualitative research is a good fit (Siggelkow, 2007, Eisenhardt, 1989; Eisenhardt & Graebner, 2007). So, the study will respond to the nascence of Web 2.0 style crowdsourcing and the still emergent theory and deficient evidence related to crowdsourcing firms and their sources of value creation. It will do so by utilising qualitative methods for the purpose of inductive theory building using multiple firm-based cases (Gioia et al., 2012) and subscribing to an interpretive paradigm (Denzin & Lincoln, 2000).

This study will take a grounded research approach, which is to utilise a process of theoretical abstraction from the data which does not privilege any one theory (Ketokivi & Choi, 2014). Setting an a priori theory or theories in such an environment of uncertainty would create pre-emptive bias and limit or endanger the findings generated by the data. The approach of the study has resulted from the fact that crowdsourcing is so novel and unfamiliar that theory must come out of an exploration of this unfamiliar entity. In situations where less is known in unchartered terrains, then existing theories might not apply (Anteby, Lifshitz & Tushman, 2014). In relation to this idea, Ketokivi and Choi (2014, p.234) state:

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The question in theory-generating case research is not whether a priori theories exist. The researcher’s concern is that when the research context is novel and unfamiliar, selecting an a priori theory through which the question is examined may create undue bias toward being theoretically conservative and directing attention to empirical observations that can be couched in the pre-selected theory...Therefore the premise in theory-generation case research is that in the context of the specific research question and empirical setting, explanation (theory) derives from exploration (analysis).

6.4.2 The topic is in the discovery stage

Stuart, McCutcheon, Handfield, McLachlin and Samson (2002, p.420) state that: “The role of research in any field is to gain knowledge and understanding including the creation of explanatory theory. It also includes discovery of previously unrecognized phenomena, classification and measurement as well as understanding of these phenomena”. They go on to highlight that in the operations field the area of web-based commerce belongs at the ‘understanding and discovery stage‘. The topic of Web 2.0 style crowdsourcing and the corresponding research questions of this study are an appropriate reflection of this fact. The rightful placement of the topic within the discovery stage of the strategic management and operations management disciplines along with the underdeveloped nature of the value creation drivers particular to crowdsourcing makes it a bona fide candidate for utilising a multiple case study design in order to develop insights and frameworks.

6.4.3 Holistic understanding of the crowdsourcing phenomenon: firm and crowd

Where a phenomenon is new, and elements such as its value drivers are unexplored, then potentially novel, rich descriptions are sometimes called upon. Anteby, Lifshitz and Tushman (2014, p.3) highlight that “rich descriptions are often needed to jumpstart our understanding of these novel contexts”. It is only by having rich data that such rich descriptions can be created. The data collected in this study was not merely a one-sided and thereby one-dimensional account of the workings of crowdsourcing in crowdsourcing firms. The crowd perspective was seen as very important because the crowd form an indisputable element of importance in crowdsourcing. To put it bluntly, a crowdsourcing-centric firm is nothing without its crowd.

The data collected provides the view of the actual agent practicing the phenomenon, that is, the crowd members. The actual crowdsourcing labourers belonging to each firm selected were also interviewed in similar numbers to the firm owners and executives.
The views of both parties provides particularly rich data because not only do they provide differing perspectives on the phenomenon of crowdsourcing but their data is sourced in 10 countries, in seven firms, in differing industries and in both interview and written survey form.

6.4.4 Crowdsourcing as a phenomenon is still progressively developing

The descriptions, concepts and constructs related to crowdsourcing are still very much in development and Afuah and Tucci (2012, p.372) predict “new organizational forms to emerge that perform largely crowdsourcing activities”. They go on to predict the ‘rich phenomenon of crowdsourcing’ will be a source of scholarly activity for many years to come. As evidence that crowdsourcing is still progressively developing, more recent developments have seen the emergence of variational hybrids of crowdsourcing such as crowdfunding and crowdshipping (Botsman, 2014; Mollick, 2014). These hybrids are also in their infancy and are different but related off-shoots of the continuing development of crowdsourcing.

6.4.5 Prequel phase pointing research toward an inductive qualitative study

An impression-forming phase was conducted in October 2011 as a prequel stage to the literature review in order to provide a preliminary directional impression and *prima facie* view of crowdsourcing and its essential descriptive elements. This impression would feed into the research question pertaining to how crowdsourcing is practised and conceptually characterised in terms of essential features and provide some initial direction as to what elements of crowdsourcing public and scholarly sources saw as important. The prequel phase comprised a multi-phase approach including a trend analysis, publicly-sourced image analysis and a specific crowdsourcing literature analysis.

This prequel phase was a useful prelude to establishing some initial notions prior to the literature review and prior to formulating case studies and questions for case study informants.

It helped, in particular, the formulation of a notion that crowdsourcing was a developing topic evidenced by the fact that there were almost no comprehensive studies which featured crowdsourcing case studies. In addition there was little developed
research and associated gaps in understanding how it was practiced in real life contexts along with little empirical evidence relating to its value creation promise.

**6.5 Justification for the use of case studies**

Scholars have described that exploratory qualitative case studies and real-life contextual interview-based data are sound basis on which researchers may attempt to build theory (Gioia et al., 2012; Eisenhardt & Graebner, 2007).

The case studies used in this study are constructed so as to allow the use of multiple sources of data in order to bring out the details from diverse viewpoints of the involved participants (Vargas-Hernandez et al., 2011). Both the firm and its corresponding crowd were seen as critical and diverse elements in crowdsourcing so both perspectives were accounted for in the case studies.

Sachan & Datta (2005) posit that case studies are useful during the early phase of the research to generate hypothesis for subsequent studies. In the words or Riege (2003, p. 80):

*The case study method is about theory construction and building and is based on the need to understand a real-life phenomenon with researchers obtaining new holistic and in-depth understandings, explanations and interpretations about previously unknown practitioners’ rich experiences, which may stem from creative discovery as much as research design.*

The efforts to achieve a realism of context are also highlighted by the study’s use of case studies. Yin (1994) sees a case study as an empirical enquiry investigating a contemporary phenomenon contextually in its real-life setting. In addition Yin (2003) describes an exploratory category of case studies, with explanatory and descriptive being alternative choices. Crowdsourcing is both contemporary and operates in a real life setting. It is still little researched and therefore justifies an exploratory approach.

In terms of theory building and the appropriateness of utilising case studies, Stuart et al. (2002) see case studies as very appropriate to discovery leading to theory development, descriptive activities leading to uncovering key issues and a way of mapping critical variables and key themes of a phenomenon of interest. The previous
small numbers of cases studies involving crowdsourcing in firms have been somewhat limited in outlining key issues and critical variables. These initial crowdsourcing case studies in the extant literature are discussed in more detail in chapter 4.

6.6 Data Collection

The data collection period ran between October 2012 and July 2013. The case studies used multiple sources of data such as interviews, qualitative surveys, emails and phone calls, media reports and interviews, document analysis, site visits, online website material, firm blogs and archival material. In total 45 semi-structured interviews were conducted including a cross-case matched selection of similarly-ranked firm executives and each firm’s corresponding crowd members. The main interview questions asked of each group (firm executives) is detailed at Appendix A.

The interview questions were partially based on the prequel phase initial impression-forming work and on a loose conceptual framework guided by the literature review.

Interview questions directed at firm executive participants were trying to probe the exact value drivers and to elicit a sense of how the crowdsourcing business operated. By so doing the questions aimed to try to discern elements concerning business model propensities (if such existed), the importance (or not) of resources and capabilities and the extent of social exchange proclivities (if such existed). This was done in tandem with asking simple and open-ended questions such as “How does using crowdsourcing create value for your organisation?” and “In what ways does the company create value for its own stakeholders (this can be for clients as well as crowdsourced staff)?” Due to the open, non-prescriptive nature of such questions - as applied to all informants – response bias was reduced.

Interview questions directed at firm crowd members probed what circumstances brought them to crowdsourcing, their motivations and difficulties, the frequency and type of work, relationships developed, payment issues, career aspirations, fun or special aspects, how they viewed crowdsourcing and their feelings about the work, the firm and clients. All crowd members were asked the same questions in the same order although
questions may have been tailored for individual responders if a later question had already been covered by an earlier response. All crowd members were given an opportunity to provide general thoughts at the end of the interview and to discuss anything they felt was not covered by the questions. Around one third of crowd respondents provided some insightful comments to this open final question.

The research used an inductive and multiple-case design (Eisenhardt & Graebner, 2007). The study was grounded in a qualitative study of seven firms with associated crowds of over 100,000 using crowdsourcing as their major revenue source (Table 6.1). An eighth firm which did not use crowdsourcing as its major income source but instead used it as a strategic firm project was also used for the purposes of establishing a test case or even polar case to maximise the likelihood of transparent observation of crowdsourcing in a variety of ways it is used by firms to help uncover the emerging value creation concepts linked to crowdsourcing (Eisenhardt, 1989) (Table 6.2).
### TABLE 6.1
Case study details

<table>
<thead>
<tr>
<th>Firm</th>
<th>Headquarters</th>
<th>Staff</th>
<th>Crowd Size</th>
<th>Industry</th>
<th>Firm Maturity</th>
<th>Interviewees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm A</td>
<td>Australia</td>
<td>75 FTE</td>
<td>228,000</td>
<td>Design</td>
<td>Start-up</td>
<td>Founder/CEO CTO Product’n Manager 3 crowd members (+2 crowd surveys)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Founded 2008</td>
<td></td>
</tr>
<tr>
<td>Firm B</td>
<td>Canada</td>
<td>30 FTE</td>
<td>200,000</td>
<td>Marketing Research</td>
<td>Start-up</td>
<td>Founder/CEO Chief Marketing O Creative Services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Founded 2009</td>
<td></td>
</tr>
<tr>
<td>Firm C</td>
<td>Nepal</td>
<td>50 FTE</td>
<td>150,000 – 1,000,000</td>
<td>information tech</td>
<td>Start-up</td>
<td>Founder/CEO Product Manager VP, Bus Develop’t 4 crowd members (+8 crowd surveys)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Founded 2008</td>
<td></td>
</tr>
<tr>
<td>Firm D</td>
<td>USA</td>
<td>50 FTE</td>
<td>5,000,000</td>
<td>Services</td>
<td>Start-up</td>
<td>Founder/CEO Founder/CTO CFO 5 crowd members</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Founded 2009</td>
<td></td>
</tr>
<tr>
<td>Firm E</td>
<td>Australia</td>
<td>300 FTE</td>
<td>7,300,000</td>
<td>Services</td>
<td>Start-up</td>
<td>Founder/CEO CTO Client Serv’s Mgr 3 crowd members</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm F</td>
<td>USA</td>
<td>20 FTE</td>
<td>100,000</td>
<td>Science</td>
<td>Start-up</td>
<td>Chairman Founder/CEO Scientist 4 crowd members</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Founded 2010</td>
<td></td>
</tr>
<tr>
<td>Firm G</td>
<td>USA</td>
<td>106 FTE</td>
<td>2,500,000</td>
<td>Fashion Design &amp; Retail</td>
<td>Start-up</td>
<td>Founder/CEO Chief Creative Offr Bus Dev Mgr 2 crowd members</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Founded 2000</td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 6.2
Polar Case study participant firm details

<table>
<thead>
<tr>
<th>Firm</th>
<th>HQ</th>
<th>Staff</th>
<th>Crowd Size</th>
<th>Industry</th>
<th>Firm Maturity</th>
<th>Interviewees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm P</td>
<td>Australia</td>
<td>550</td>
<td>6,000</td>
<td>Grape-growing Wine Production &amp; Liquor Wholesaling</td>
<td>Founded 1965</td>
<td>Global Marketing Sales Export Mgr Senior Innovation &amp; Brand Manager Creative Director</td>
</tr>
</tbody>
</table>
6.6.1 Case Selection

In keeping with the study’s inductive and qualitative nature, firms were not selected randomly but rather theoretically sampled (Eisenhardt, 1989, Eisenhardt & Graebner, 2007, Yin, 1993). Therefore, of critical importance was the manner in which the crowdsourcing firms had operationalised crowdsourcing. This manner of firms using crowdsourcing had to be of a critical and indeed existential nature, whereby the majority of each firm’s revenue was raised using crowdsourcing. It was surmised that value creation generated in such a situation would be more readily able to be attributed to the crowdsourcing phenomenon. In this instance, the observations emanating from the data are tied much more directly to crowdsourcing per se and its field practices. All seven firms were using crowdsourcing existentially and self-identified as ‘crowdsourcing’ firms (in fact it was often a source of pride).

The research setting was born out of Web 2.0 style electronic business better known as e-business, which encompasses Internet-based business, e-commerce, e-markets and conceptually captures the notion of firms conducting usually non-trivial, complex commercial transactions involving all important stakeholders over the Internet (Zott, Amit & Massa, 2011). Teece (2010) expounds the view that the arrival of Internet-based business since the late 1990s has raised new questions concerning how e-businesses, or indeed any businesses, can deliver value to customers and create and capture value in such a fundamentally new environment. Crowdsourcing is an emerging and developing form of e-business in the sense that it is an Internet-centric type of business and relies completely on ubiquitous, global, cloud-based networks.

All seven crowdsourcing firms were chosen for being examples of firms that relatively well-established considering how new crowdsourcing is as an operational element of significance. The term ‘crowdsourcing’ was first mentioned in 2006 (Howe, 2006a) and with this date in mind, firms selected for the study were in fact early versions of ‘crowdsourcing’ firms - with most firms founding within three years of this date and with two of the selected firms even pre-dating the public outing of the term ‘crowdsourcing’. One firm founded within four years of the foundational 2006 public pronouncement of crowdsourcing and the test/polar case crowdsourcing project was established more recently in 2012. The researchers formed the view that the firms selected had been running a sufficient period to allow a sense of how the phenomenon
of crowdsourcing works in a crowdsourcing firm and for value creation elements to emerge.

In addition according to Afuah and Tucci (2012), there are two different types of crowdsourcing, tournament-based where the crowd compete and a winner emerges or collaboration-based crowd members join up to work together collaboratively on a problem to help solve it or improve it and thereby provide one ‘combined-effort’ solution at the end. Firms were selected based on a mix of these two styles. Firms A, D, E, F and G were tournament-based. Firms B, C and P were collaboration-based.

In a recent definition of crowdsourcing parameters for the optimal crowd size associated with crowdsourcing was discussed as being between a few thousand and 330,000 people (Estelles-Arolas & Gonzalez-Ladron De-Guevara, 2012). The seven firms which were chosen had crowd member sizes of over 100,000 (with the exception of the polar case firm) because these were within the defined parameters and we also deemed large enough to do sufficient justice to Howe’s (2006a) original definition of crowdsourcing as a ‘large network of people’.

Firms were selected based in four countries including Australia, Canada, Nepal and the United States of America (USA) to participate in this study. The interviews were conducted focussing on firm founders and executives and each firm’s corresponding crowd (with the exception of firm B and firm P who presented legal impediments to sourcing crowd members). Firms were selected across multiple industries due to the fact that well-established and consequently large enough crowdsourcing firms were required (see previous paragraph). Due to how new the establishment of such sufficiently large crowdsourcing-centric firms are, the operational industry of each was considered secondary to its crowdsourcing operational business model. In this sense it mattered less what industry the firm was operating and more that it self-identified as a crowdsourcing firm.

Data was collected and altered iteratively based on informant response so that interview questions that caused confusion for example were removed and later informants were not exposed to those questions.
The study also used purposeful sampling of two distinct informant groups, namely, firm executives and firm crowd members. These informants were deemed to have unique insights and expert knowledge of crowdsourcing in a real-life context. The firm executive participants were c-level informants and also included founders of all firms. It was important that the firm founders were interviewed due to their lifecycle experience commencing at the firm foundation to provide a particularly intense insight. All executive informants had been at the firm for more than 12 months. The firm owners had all built successful and growing firms which were entirely crowdsourcing-focussed. The crowd members were experienced and dedicated to crowd-based work. None of the crowd informants lacked crowdsourcing experience and indeed some informants were performing crowd-based tasks up to 18 hours a day, every day.

In keeping with the prescriptions of Glaser and Strauss (1967), I employed consistent interview and written survey questions to all informants in each of the two groups so as to allow constant data comparison data across both groups of informants over time. Such repetitive data collection resulted in the exponential building up of themes until no new themes were appearing and data saturation was thereby achieved.

6.6.2 Polar case

It is often recommended that qualitative researchers include contrasting or ‘polar cases’ in the sample as a check for whether the emergent theory is applicable under differing circumstances (Eisenhardt, 1989; Eistenhardt & Graebner, 2007; Yin, 2003).

One of the eight firms selected was Firm P. Unlike the other firms, this firm was not using crowdsourcing as its main operational system. Firm P was using crowdsourcing in a strategically important marketing campaign to launch a new product. The firm collected 10,000 data points through the crowdsourcing campaign which provided valuable information about their clientele and consumer-centric viewpoint concerning product development. They labelled this ‘prosumerism’ where consumers and producers come together to help develop products.
The results of the crowdsourcing campaign were outstanding and the launch product became the second biggest launched product in Australia in its category for 2013. The winner of the category invested many millions more of funding in their launch campaign.

Firm P informants considered that they were radical for using such a unique and unusual method of new product launch and expressed a desire to use crowdsourcing again in future campaigns. Unfortunately due to the structure of how the campaign was run, which used anonymous opt-in by the crowd, individual crowd members could not be included as informants in this case study.

Firm P in this study attracts much less analysis than the other cases and serves more as a basis to highlight or amplify findings or to provide contrast to the other cases where appropriate.

6.7 Research Design

The research design covers data collection phases, which were divided into two parts including the prequel phase and the data collection phase including in-depth interviews. It also covers what unit of analysis is employed, as well as the background and essential operations of each of the firms used in the study. A comparison of how each firm has used their crowd is also utilised.

The research was designed so as to encompass successful and well-patronised crowdsourcing firms which were located in four separate countries to provide a broad base upon which the data was predicated. All company founders were interviewed so as to provide close insights on how the companies grew and expanded and what led to utilising crowdsourcing. The crowd were chosen from 10 countries, with half those countries being developing countries and the other half being developed countries to provide a broad and even-handed approach to understanding the key issues affecting crowd members.
6.7.1 Data collection – Phase one

The first phase was the prequel phase which contextually was Internet-based and comprised an Internet-based trend analysis and a literature analysis. The data collected at this initial phase helped to formulate content for interview question subject matter and helped to generally orient the topic toward crowdsourcing practices and value creation. Chapter three specifies this first phase in detail.

6.7.2 Data collection – Phase two

Phase two was initiated in order to form a deep understanding of how the phenomenon of crowdsourcing works in a crowdsourcing firm and how value elements are formed. To do so I conducted case studies which included in-depth interviews with 24 crowdsourcing business executives including founders and also matched with 21 crowdsourcing crowd members associated with six of the eight crowdsourcing firms. A further 10 crowd members filled out free-form qualitative surveys (See Appendix C). One of the crowdsourcing firms (Firm B) had (country-of-origin based) strict privacy laws and ethics concerning their crowd and firm founders felt they could reveal no details concerning who were members of their crowd or even how to find them anonymously. Therefore, due to this unavoidable situation, this crowdsourcing firm did not have associated matched crowd interviews. In terms of the test/polar case (Firm P) only executives of the firm were interviewed because the crowd was used only once in the context of a single firm project and were recruited through a third party firm.

The firm executives were located in four countries Australia, Canada, United States of America (USA) and Nepal. These diverse countries were included to boost internal validity as it ties to case selection (Scandura & Williams, 2000) (see also Table 6.1). They also included both developed and developing countries to help strengthen research triangulation. The crowd members who were interviewed were located in 10 countries including Australia, Canada, Nepal, New Zealand, Philippines, Serbia, United Kingdom (UK), Ukraine, USA and Venezuela. These diverse countries were included to provide evidence for the study’s internal validity related to case selection (Scandura & Williams, 2000) (see also Table 6.1). The study also included a balance of both developed and developing countries to help strengthen research triangulation. All crowd interviews were conducted one-to-one and four out of 21 were face-to-face. The remaining 17 crowd interviews were conducted remotely by telephone, mobile phone or
Skype. In terms of the 21 crowd members who were interviewed, 11 were based in developing countries and 10 in developed countries.

Of the 21 crowd members interviewed, 10 were paid modest sums for their interview. Of the 10 who were paid, six were based in developing countries and four based in developed countries. None of the 10 crowd members from two firms who filled out a qualitative survey were paid.

In relation to one of the firms in the study, payment of crowd informants was unavoidable because the crowd had to be recruited from the firm’s website which precluded the researchers being able to set up a ‘free’ job. In another two firms the payments were optional with most crowd informants expressing a wish to be paid, although one, based in a developing country, did not.

To recruit firm executive/founder participants crowdsourcing firms were selected which had associated crowds of over 100,000, had been established more than three years and were recognised publicly as crowdsourcing firms – in most cases the firms were publicly (proudly) self-proclaimed crowdsourcing firms on their firm website and in press articles. Most of the firms selected for the study had won major industry awards and public accolades for their unique (and successful) approach to business. Of the 24 executives, 18 of them were recruited by an initial email, only one was recruited as a result of a serendipitous personal meeting and five more were recruited via a ‘snowball effect’ once initial contact with an executive had been established.

Guidelines of purposeful sampling in selecting interview candidates were followed (Corley & Gioia, 2004). It was felt that interview informants most able to inform about the phenomenon of crowdsourcing in crowdsourcing firms would by those who were firm founders of crowdsourcing-based firms along with their most senior firm executives. This ‘executive’ group of interviewees were informed prima facie that they were participating in interviews for “academic research into the phenomenon of crowdsourcing and how it creates value for business”.

Of the 24 executives all, except three, were ‘C’ level and including all company founders. Of those three non-‘C’ level all were considered senior managers. Interview length averaged 40 minutes. All interviews were audio-recorded and directly transcribed
in vivo. Of the 24 executives interviewed, five were interviewed face-to-face, the remaining 19 were interviewed by telephone, mobile phone or Skype.

The executive interviews were semi-structured and covered firm size, age, scale, start-up details, value creation, crowdsourcing, stakeholders, crowds, capabilities, resources, communication, competitors, competitive advantage and future aspirations. These issues received sufficient coverage via the 24 executive interviews due to the relatively detailed discussions provided by the executives on these points. I evaluated based on a number of frequently-occurring common threads concerning these 14 major issues across all 24 executive informants that the information emanating from the combined responses had reached saturation point. At this point of saturation it became clear that no further new information was emerging and incremental learning was sharply diminishing (Eisenhardt, 1989).

One question emerged through the initial impression-forming prequel phase whereby early literature placed crowdsourcing variously as a business model, a firm capability, a resource or saw it as an artefact of Web 2.0 style communication. The question emanating from this prequel phase was:- “Do you see crowdsourcing as primarily a business model, a company capability, a company resource or a form of communication?” This question, however, caused some degree of interviewee confusion with one interviewee choosing not to respond to it and with another providing a fairly glib one-word answer. As a result this question was discarded after being used in only three interviews. The prequel phase concepts of crowdsourcing being conceived in the early literature as a business model, firm capability, firm resource or Internet Web 2.0 communication artefact were split into individual questions – so these concepts were not missed.

Any interviewees wanting to talk at length regarding any issue were encouraged by me. All crowd interviewees were sent their own interview in written transcription form after the interview to confirm its accuracy and only one executive provided some minor comments. The full interview protocol used for crowd members is at Appendix B (interview questions) and Appendix C (written questions).
The crowd members who worked for each of the firms of interest were recruited for interviews through various means. Initially I set up a website called www.crowdsourcingsurvey.com in order to recruit crowd members anonymously. This reaped no responses. Another attempt at recruiting crowd members to interview involved me utilising websites catering to crowd issues such as www.getsatisfaction.com and www.mturkforum.com. The original request was for crowd workers to volunteer their time to be interviewed and this request was rejected by the crowd who made it very clear they would not be interviewed unless they were paid. One company executive (the CFO of one of the firms of interest) noticed my web-entry seeking interested crowd members on the www.getsatisfaction.com website and contacted me directly and volunteered to help. He eventually helped locate five crowd members willing to be interviewed. Another firm asked via Facebook if any of their crowd would be willing to volunteer and four did so with a further eight filling out a qualitative survey. Two firm executives provided a contact in each of their firms who specialised in crowd relationships and contact was made with five crowd members through this method, with three being interviewed and two filling out a qualitative survey. One crowd member was recruited through a public appearance on Australian television on an ABC broadcast and in ‘snowball’ fashion he provided three further crowd member contacts who agreed to be interviewed. A crowdsourcing ‘job’ was placed on one firm’s website requesting crowd interviews which attracted multiple crowd members willing to be interviewed. The first three crowd members who posted their willingness were chosen via this method. Of the 21 interviewed crowd members utilised for the study, interview lengths averaged 20.5 minutes. A decision was taken to pay crowd workers for their interview if they so requested. Of the 21 interviews, 14 interviewees requested a (modest) payment. All interviews were audio-recorded and directly transcribed as spoken. All crowd interviewees were sent their own interview in written transcription form after the interview to confirm its accuracy. Only two crowd members slightly altered their responses.

The crowd interviews were semi-structured and covered how they started, motivations, payments, tasks, relationships, trust levels, career aspirations, persistence...
levels, feelings of being special, having fun, difficulties encountered and an open question about their own thoughts. These issues received sufficient coverage via the 21 crowd interviews due to the targeted discussions by the crowd. The 11 major issues discussed by the crowd as well as the open question raised frequently- occurring common threads. I evaluated that information emanating from the combined responses of the 21 crowd members along with the further 10 crowd qualitative surveys had reached saturation point. At this point of saturation it became clear that no further new information was emerging and incremental learning was sharply diminishing (Eisenhardt, 1989).

The questions in the qualitative survey filled out by some crowd members mirrored the questions asked of crowd members at interview. The full protocol for executive and crowd interviews and crowd written surveys is available altogether at Appendices A, B and C.

Further data including press interviews of five of the firm founders and one television interview of a crowd member were also utilised in data analysis. Extensive web-based Facebook entries of six of the firms were converted to database formatting and imported to NVivo 10 software package and analysed along with the interview data. Thirty five press releases related to all firms of interest were also utilised. This was in addition to written notes from workplace observations from site visits to three of the firms.

6.7.3 Unit of Analysis

In terms of the first research question concerning how crowdsourcing is practised and conceptually characterised in terms of essential features, the unit of analysis is the phenomenon of crowdsourcing. This is appropriate in terms of providing a launching place to unpack the critical elements of the actual phenomenon. Crowdsourcing operates inside a business and inside an industry but its boundaries are broader than these units of analysis. So when unpacking what crowdsourcing is, it is important to reach beyond the obvious firm or industry units of analysis and look at how the phenomenon itself works, has developed, is defined and under what conditions it flourishes and is used.
There has been precedence where the phenomenon itself is employed as a unit of analysis. For example, Zott, Amit and Massa (2011) are at pains in their article regarding the ‘business model’ that one of the important themes was that the phenomenon itself, that is the business model, was seen as a new unit of analysis. The use of the phenomenon itself as a unit of analysis holds the promise of yielding rich and interesting results.

In terms of the second research question, how crowdsourcing creates value for its key stakeholders, the unit of analysis takes on a more sophisticated guise. Lepak et al. (2007) express the importance of the unit of analysis in terms of its relationship to the concept of value creation. They clearly state that: “Although the definition of value creation is common across levels of analysis, the process of value creation will differ based on whether value is created by an individual, an organization, or society.” (p.180). Lepak et al. (2007) advocate a varying perspective to clarify from the vantage point of a particular source what both the source-originated and the eventual targets of value creation are.

Such sentiments are of critical importance to this study. In terms of the contingency approach suggested by Lepak et al. (2007) this study will focus on two sources of value creation, namely the individual and the firm. From the perspective of the individual vantage point, single individual acts of value creation as well as the individual’s own individual attributes such as intelligence or persistence may play a role in value creation. From the perspective of the firm, firm-specific acts of value creation combined with elements for example concerning management decision-making, entrepreneurship, risk-taking and innovation for example may play a role in value creation. The target of the value creation from both the individual source and the firm source is also a key unit of analysis. How does the target benefit from the end-result of the value creation process issuing from the source of individual and/or firm?

6.7.4 Background & essential operations of firms selected

Firm A - Summary

Firm A is based in Melbourne, Australia. It operates primarily in the online graphic design space, where it is a leader in its field. It has a crowd ‘philosophy of ‘anyone, anywhere, anytime’. The company is a mediator between customer and crowd and
makes money as a percentage on each transaction. It considers itself an ‘ultimate meritocracy’ whereby crowd members are paid only on finished products and the top result(s). Its crowd is global and resides in many non-English speaking countries however, the language barrier is reduced in that the crowd produces many images and drawings as part of their work which is (in terms of language) ‘universal’. The firm makes some efforts to curate the crowd. There is a ‘community team’ which is focused on crowd relationships based in the United States of America.

The client is ‘unknown’ to company in the sense that the website is automated and largely encourages client self-service. Money is automatically transacted via the pre-existing transactional system in place. The vast majority of crowd work submitters are not paid because it is a winner-takes-all competition. So the client may have a choice of scores of crowd member submissions but typically chooses only one or two and only these crowd members are paid.

Interestingly the owners of the business initially tried to ‘kill off’ the essence of its business model because it had sprung up somewhat organically and independently of the company owners’ strategy. They realised just before they tried to stop it that it could be a lucrative new business.

The model Firm A uses to raise revenue is summarised below in Figure 6.1.

**FIGURE 6.1**
**Schematic of workflow in Firm A**

Crowdsourcing auto - Firm creates a client self-serve system whereby work request submission is efficient and highly automated and client sorts and decides results from crowd production

<table>
<thead>
<tr>
<th>Firm</th>
<th>Client</th>
<th>Crowd</th>
<th>Client</th>
<th>Firm</th>
<th>Crowd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attracts clients paid</td>
<td>Creates work requests</td>
<td>Submits work for judgement</td>
<td>Chooses winner &amp; pays</td>
<td>Collects payment &amp; pays crowd</td>
<td>Winner</td>
</tr>
<tr>
<td>Attracts a crowd</td>
<td>Creates open call process</td>
<td>Creates client self-serve work request process</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Firm B – Summary**

Firm B is based in Calgary in Canada. It is a firm which provides its clients with unique brand and product innovation services. The firm would not allow us to source crowd members for crowd interviews. This was due to Canadian privacy laws because
they were unable to pass on contact details of crowd. Again, like Firm A the philosophy of Firm B in terms of their crowd is ‘anyone, anywhere, anytime’ albeit sometimes parameters are set such as the crowd members may have to be associated with a particular firm or fans of a particular brand. Crowd members sometimes volunteer their time or are paid with a store gift card, which is usually transferred online. No cash payments are paid to any crowd members.

The firm started crowdsourcing very early and in fact preceded crowdsourcing-style operations before the official term of crowdsourcing was established. The person who coined the term crowdsourcing, Jeff Howe, in fact contacted them and told them that they were in fact ‘crowdsourcing’ and they mentioned at interview being happy they could now put a name to what they did!

Essentially Firm B is a consulting firm and clients use them as consultants so the firm makes money from consulting fees. The firm uses proprietary technology and deep knowledge of crowd engagement to form a ‘global’ picture of a brand and suggest improvements. The firm prides itself on its democratic approach to bringing all parties together in forming a holistic strategic picture for its clients. Firm B’s model is summarised in figure 6.2 below:

**FIGURE 6.2**

Schematic of workflow in Firm B

Crowdsourcing - Firm works with client to submit work requests to crowd and client sorts and decides results from crowd production

Firm attracts clients paid

Crowd submits work for judgement

Client chooses winner & pays firm

Firm collects payment & pays crowd

Winner(s)

Job may be unpaid, volunteer based

Attracts a crowd thanked

Creates open call process

Creates work requests after client consultation

**Firm C – Summary**

Firm C is based in Kathmandu in Nepal. It runs as a social enterprise that melds human and machine learning and offers advanced forms of data processing services. Both crowd and company interviews were conducted for Firm C. Firm C uses what they term ‘hybrid crowdsourcing’ which is a model where the crowd is often selected
by the firm from well-educated university students or via a social grid of existing team leaders. Their view is that hybrid crowdsourcing leads to more personal responsibility of crowd members and more control by the firm which fosters a better output for clients. There is considerable social Facebook activity among crowd. The crowd are generally paid for their time and work in defined shifts. Some crowd members are able to join randomly and their quality is tested frequently by automated tests. So, the crowd proficiency to complete tasks and English proficiency is tested regularly via algorithm-controlled technology. If any crowd member’s work is not up to quality standards the crowd member is prevented from further work by the firm’s technology system.

Clients are known to the company and the firm tends toward larger contracts (>\$50,000 USD) rather than lots of small individual jobs. The firm makes money from client contracts and the huge currency differential between incoming payments in USD and outgoing staff payments in Nepalese rupee.

The firm operates as a middle-broker between client and crowd and controls crowd workflows and work assignment and shifts. The crowd generally provides its own infrastructure such as computers and they work remotely. There are opportunities for crowd members to advance to team leader status and higher pay.

The firm runs a unique model whereby company takes great efforts with crowd curation, for example, they sponsor and run weekly moral/ethical training sessions and practical assignments. In these assignments crowd members must do community volunteer work or similar. The company has recently expanded to Africa and has commenced using the same crowd curation and character-building focus upon its African crowd. The firm is a for-profit firm even though it appears at glance to be not-for-profit – and many mistake it for a not-for-profit.

The operational model Firm C uses to raise revenue is summarised below (Figure 6.3).
Firm helps locate the ‘best’ crowd and curates and steers clients. The firm automatically sorts and decides results from crowd production. Crowds are tested regularly via technological testing systems which automatically bar non-performers.

**Firm D – Summary**

Firm D is based in San Francisco in the USA. It is a people-powered data enrichment platform where clients can have their data collected, cleaned and labelled. Both crowd and company interviews were conducted for this firm. Similar to Firms A and B the crowd philosophy is an ‘anyone, anywhere, anytime’ model. Again it is styled as an ultimate meritocracy, whereby only crowd member’s the output and the best selected crowd production receive monetary compensation. The firm’s enormous crowd of 5 million is automatically controlled and regulated through advanced algorithms which test regularly for proficiency and accuracy. The firm guarantees the standard of its crowd based on the accuracy generated by its proprietary algorithms. The firm ensures extremely high work quality by the completely anonymous crowd to the client. The algorithms sort ‘good’ from ‘bad’ crowd contributions. Crowd members who fail against the algorithm are not allowed to complete the task because if work is sub-par the real time accuracy score generated by the system will prevent them from progressing.

Firm D does not recruit its crowd directly. It uses third party recruiters and pays the third party recruiters directly based purely on the amount of work successfully completed. Firm D generally only know crowd members by a number. Its system can work out in which country the crowd member resides. The third party directly pays crowd members. The crowd is paid often virtually, through points systems or through Internet-transferred store gift cards via the third party recruiters.
The firm curates its crowd in a very limited fashion. There is some help tendered by Firm D staff at www.getsatisfaction.com which is an independent site where crowd members go to list problems and get firm D or crowd-based community help. There is a small elite group used by the company for special slightly higher paying tasks – these crowd members deal direct with firm D. The firm makes money from big client contracts and has a number of Fortune 500 clients. The firm prides itself that work can be scaled up or down (at monumental levels) with little notice. This means clients can literally have 100,000 people working for minutes on a particular task and pay in the cents for each transaction.

The operational model Firm D uses to raise revenue is summarised below (Figure 6.4).

**FIGURE 6.4**
Schematic of workflow in Firm D

Firm Client Crowd Tech Auto Process Firm 3rd party/Crowd

- Attracts clients
- Creates work requests
- Submits work
- Sorts good from bad work
- Collects payment & pays 3rd party
- 3rd party pay 'good'
- Recruits crowd via 3rd parties
- Creates an open call process open to all
- Forwards complete work to client

**Firm E – Summary**

Firm E is based in Sydney in Australia. It is an online freelance services firm. The study researchers conducted both crowd and company interviews. Again, the model used by the firm is the ‘anyone, anywhere, anytime’ model for crowd recruitment. Again, as with firms A, B and D, firm E sees itself as an ultimate meritocracy, whereby the best production rises to the top and the client simply chooses the best crowd output without knowing anything about the crowd member who produced it. Firm E, with a crowd of more than eight million, has limited crowd curation. Its website is highly automated and efficiently transactional so clients and crowd are not ‘known’ individually to the company. The firm is the middle-broker between clients and crowd and takes a percentage of each transaction.
It is a similar business model to Firm A whereby the crowd member is only paid if client chooses their production offering. Many crowd members are not paid because it is a winner-takes-all competition. The firm runs on both crowdsourcing and online outsourcing. Clients benefit from access to skilled staff in developing countries who offer significantly cheaper hourly rates for work which can be produced online such as for tasks involving writing, coding, transcriptions, drawing, data processing and website creation. Firm E have reported that at times the crowd and clients collaboratively add new work categories. In this instance, the firm will take note of the new work category and add to the available work categories on their website.

The model Firm E uses to raise revenue is summarised below in Figure 6.5.

**FIGURE 6.5**
Schematic of workflow in Firm E

Crowdsourcing auto - Firm creates a client self-serve system whereby work request submission is efficient and highly automated and client sorts and decides results from crowd production

<table>
<thead>
<tr>
<th>Firm</th>
<th>Client</th>
<th>Crowd</th>
<th>Client</th>
<th>Firm</th>
<th>Crowd</th>
<th>Winner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attracts clients paid</td>
<td>Creates work requests</td>
<td>Submits work for judgement</td>
<td>Chooses winner &amp; pays</td>
<td>Collects payment &amp; pays crowd</td>
<td>Winner paid</td>
<td></td>
</tr>
<tr>
<td>Attracts a crowd</td>
<td>Creates open call process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creates client self-serve work request process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Firm F – Summary**

Firm F is based in San Francisco, USA after having commenced its operations and relocated from Melbourne, Australia. It runs a specialist data science and data prediction platform and offers specialised data analysis services for clients. The researchers for the study conducted both crowd and company interviews. Again, as with the above firms, except Firm C, the firm has a model of ‘anyone, anywhere, anytime’ for its crowd recruitment. The crowd self-selection is in terms of the self-imposed parameter that each crowd member must be highly skilled in data analysis and data predictions and be capable of delivering advanced algorithms.
The crowd enters competitions to win (oftentimes large) prize-money. Prize money has sometimes been in excess of $1 million. Many competitions are for ‘kudos of winning’ only however. The firm boasts more than ten thousand registered PhD crowd members who are highly educated and often in well-paying day jobs. The crowd itself comprise around 100,000 members.

The firm oftentimes appears to attract enthusiasts who enjoy data crunching as a hobby. The firm’s key proprietary leader board is updated regularly in real-time to ensure teams know where they place at all times during the course of the competition. The firm has always out-performed previously-established knowledge in the area of interest and existing algorithms. The firm prides itself on finding talent in unusual fields, such as a glaciologist who solved a long-standing National Aeronautics and Space Administration (NASA) space problem which was put to competition.

Few crowd members get paid because each competition is fiercely fought. The firm is a middle-broker between client and crowd and makes money from individual firm competitions. The crowd receives some curation as there is a large community section on the firm website where data scientists provide cost-free help to each other. There is also an educational component at the website to help universities and schools. Some employees of data scientists are now asking for a firm-sponsored score when recruiting. The model Firm F uses to raise revenue is summarised below in Figure 6.6.

**FIGURE 6.6**
*Schematic of workflow in Firm F*

![Schematic of workflow in Firm F](image)

Crowdsourcing techno - Technical automatic crowd production sorting process creates efficiency and objective meritorious voting system

- Firm attracts clients
- Client creates work requests
- Crowd submits work
- Tech Auto Process selects winner
- Firm informs winner
- Client pays firm
- Firm collects payment
- Winner paid

Attracts a crowd

Creates open call process
Firm G – Summary

Firm G is based in Chicago, USA. It is an online fashion retailer. The researchers conducted both crowd and company interviews. Again, the firm use a model for crowd recruitment of ‘anyone, anywhere, anytime’. However each crowd member self-selects as being highly skilled in image production. There are three crowds which are curated by firm G. These include one artist crowd and one voting crowd and one buying crowd.

The artist crowd enters always-open design submission competitions to win modest prize-money. Most people who enter do not win because there are about 300 entries per week and only around 10 of those chosen by the voting crowd.

The voting crowd choose the t-shirt designs they like best and these are sent off by the firm for manufactured production.

The buying crowd (which includes but is not limited to both the artist and voting crowds) are informed when the manufactured product is available and all units of production typically sell out.

There is some profit sharing between the firm and the winning artist crowd members. The firm has limited staff to control or overlay the decision-making of the voting crowd. The whole crowd model used creates a highly efficient system of production submission, subsequent related voting, marketing, public relations and subsequent selling to the crowd.

The firm has won a significant national ‘most innovative company’ in USA in 2007. The submission crowd mostly do not get paid but many crowd artists are in other paid jobs and do it as a hobby. A few make a good living. The voting and buying crowds also do not get paid by the firm – in fact the buying crowd pay the firm.

The firm make money on each manufactured production unit sold. They have expanded recently to other related products to increase their consumer reach. The model Firm G uses to raise revenue is summarised below in Figure 6.7.
Crowdsourcing crowd - Three distinct crowds of work submitters, product voters and end-consumers

**FIGURE 6.7**
Schematic of workflow in Firm G

Firm Crowd Crowd Firm Firm Crowd
Attracts clients Submits work Judges work & votes Sorts best voted products Sends voted products to be made Winner paid
Attracts a crowd
Creates open call process

**Firm P - Summary**

Firm P functions in the study as a ‘polar’ case to illustrate further knowledge and deeper learning on the phenomenon of crowdsourcing and how it is practised and how it creates value. Firm P, rather than being a firm that practices crowdsourcing as its main revenue-raising activity like the other firms in the study, it simply used crowdsourcing in a major new product development, launch and sales campaign in 2012. It is a firm which is involved in agriculture and retail services connected to the liquor trade industry.

Firm P is based in rural New South Wales with a major office in Sydney, Australia. Only company executive interviews were conducted with three senior firm executives. The firm could not provide details of crowd members due to legal impediments so interviews were not possible. This firm used a model for crowd recruitment of ‘anyone, anytime’ but not ‘anywhere’ with the main limitation being that it was an Australian-focussed crowdsourcing campaign. The crowd was curated on a limited basis by firm G, mainly being through the provision of taking part in a ‘fun’ campaign and for small rewards on a limited basis. The crowd functioned as participants in new product development by providing a multitude of data including personal preferences along with pictures, videos, sound and GPS data related to the product being developed. The crowd later functioned as consumers of the new product which they helped to develop.

The firm claimed the campaign cost one eighth of its closest rivals’ respective campaigns and was launched as the third most successful new product launch in Australia in its field in 2012. Firm P operates in a highly competitive and high value industry shown in Figure 6.8 below.
6.7.5 Comparative Summary of how the crowd is used in each firm

Given the firm background and the model of crowdsourcing each firm utilises it is important to summarise how each firm uses and attracts its crowd and how value is created for crowd members in each firm. A comparative table of each of the case study firms and crowd is summarised below in Table 6.3:

<table>
<thead>
<tr>
<th>Firm</th>
<th>How crowd is used</th>
<th>How crowd is attracted</th>
<th>Value for crowd</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Competitively to create designs</td>
<td>Money, community, showcasing of work</td>
<td>Money/work, community, flexibility, client-building, personal interest</td>
</tr>
<tr>
<td>B</td>
<td>Co-operatively to inform market research</td>
<td>Interest in the project, brand association, Brand fan interest, community recruited on brand knowledge and usage</td>
<td>Philanthropy, passion-outlet, hobby</td>
</tr>
<tr>
<td>C</td>
<td>Co-operatively to perform microtasks</td>
<td>Formalised via social grid, few alternative sources of part-time work, elite university students</td>
<td>Money, philanthropy, community, participate, constant work</td>
</tr>
<tr>
<td>D</td>
<td>Competitively to perform microtasks</td>
<td>Formalised via 3rd party recruiters, money, true anyone, anytime, anywhere flexibility</td>
<td>Money, flexibility, anyone can participate, constant work</td>
</tr>
<tr>
<td>E</td>
<td>Competitively to perform microtasks</td>
<td>Money, constant work and biggest job offering</td>
<td>Money, flexibility, client-building</td>
</tr>
<tr>
<td>F</td>
<td>Competitively to solve data problems</td>
<td>Formalised via university/science networks, strong internal community, assists with job-seeking, challenge-driven</td>
<td>Learning, challenge, fun, philanthropy, community, team-building</td>
</tr>
<tr>
<td>G</td>
<td>Competitively to create designs; Co-operatively to vote on designs; Co-operatively to purchase designs</td>
<td>Formalised via online community, feedback and fun interaction stressed, strong long-term community, high firm-crowd interaction, consumer crowd purchase unique products.</td>
<td>Fun, community, challenge, interest, anyone can participate, money</td>
</tr>
<tr>
<td>P</td>
<td>Co-operatively to build collective feedback on a new product development during its conception to its launch; Co-operatively to purchase the new product</td>
<td>Formalised via online community, feedback and fun interaction emphasised, firm and crowd interaction is chiefly via technological interface, consumer crowd purchase unique products they helped to create.</td>
<td>Fun, personal-interest, anyone can participate, small product rewards in some limited cases.</td>
</tr>
</tbody>
</table>
6.8 Data Sources

The case studies used multiple sources of data such as interviews, qualitative surveys, emails and phone calls, site visits and observational data, media/news reports, document and image analysis, online website material, firm blogs, website public web-posting sites and archival material.

A summary of the data sources, quantity and types are illustrated in Table 6.4.

<table>
<thead>
<tr>
<th>Themes</th>
<th>Data Type</th>
<th>Quantity</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviews</td>
<td>Interviews</td>
<td>45</td>
<td>Expert informants</td>
</tr>
<tr>
<td>Interviews</td>
<td>Phone calls</td>
<td>52</td>
<td>Expert informants, Support staff, Crowd members.</td>
</tr>
<tr>
<td>Surveys</td>
<td>Qualitative Surveys</td>
<td>10</td>
<td>Expert informants</td>
</tr>
<tr>
<td>Observation</td>
<td>Site visits</td>
<td>3</td>
<td>Business premises occupants</td>
</tr>
<tr>
<td>Observation</td>
<td>Observational data</td>
<td>15 hours</td>
<td>Notes &amp; recordings from site visits; Notes from two-way exchanges in crowd community sites; Notes and recordings from 2-day industry conference.</td>
</tr>
<tr>
<td>Online</td>
<td>Company Facebook</td>
<td>20 visits to 8 Facebook accounts</td>
<td>In-house corporate communications, Feedback from clients and crowd members, complaints and praise from crowd members, company events, company photographs of premises and major events. Company philosophy and mission statements. Specialty crowd sections.</td>
</tr>
<tr>
<td>Online</td>
<td>Company Twitter</td>
<td>4 visits to 3 Twitter accounts</td>
<td>In-house corporate communications, company events, company philosophy and mission messages.</td>
</tr>
<tr>
<td>Online</td>
<td>Company blogs</td>
<td>55 visits to 8 company blog-sites</td>
<td>Expert company informants including founders and CEOs and other high level executives.</td>
</tr>
<tr>
<td>Online</td>
<td>Emails</td>
<td>105</td>
<td>Expert informants Support staff, Crowd members.</td>
</tr>
<tr>
<td>Online</td>
<td>Image analysis</td>
<td>80</td>
<td>In-house communication images. Firm event images. Showcase images.</td>
</tr>
</tbody>
</table>
Online
Archival material
3
Archived company introduction document. Archived Facebook entries.

Online
Media and News reports
80
Online newspaper and practitioner journal reports. Online trend reports.

Conference
Conference speeches
2
Recordings from company speeches at Industry Conference

All interviews were digitally transcribed by a paid, professional transcriber, who was in-house to the University so as to maintain confidentiality of interviews. The interviews were re-checked again post-transcription. They were then sent to each informant for further checking. Two informants (one executive and one crowd) made minor alterations. One (crowd) informant completely re-wrote the transcription because he had changed his mind about his views.

The qualitative surveys (Appendix C) were based closely on the same questions asked of crowd informant interviewees. These surveys were delivered to 10 crowd informants in two different firms (Firms A and C). Informants in these firms expressed a preference to write rather than verbalise their experiences of crowd labour. These 10 responses were analysed alongside the written transcriptions of the interview material from crowd informants from the same firms.

Three site visits were conducted during data collection and provided data source material. These sites included two in the USA and one in Australia. All site visits included an extensive and personalised walking tour of the premises, including office and kitchen facilities. The walking tour was conducted by a senior executive in all cases. Each premises was characterised by its somewhat secretive, external anonymity – no (or very subtle) site branding was observable. Two of the sites, in the heart of Silicon Valley, were characterised by a very casual vibe with visible bikes, open desk seating, music playing and some leisure artefacts, for example a Billiards table, a Chess table and a Foosball table, visible. When the site visits were underway, in order to reduce any reflexivity bias that may result from my presence, I arranged most observations to look as casual-appearing as possible. For example in two separate firms I was taken on a spur-of-the-moment tour by an executive informant, where I noted down observations of firm work team members in the office environment in a relatively
naturalistic manner – given that neither of the tours were planned or expected by present staff members. During such tours observational details were recalled later in field notes.

All firms had a home website often with company weblogs (blogs) and some had variety of additional web-based firm resources in the form of Facebook. These additional sources proved fertile ground for data collection with some very candid and in-depth company blogs sometimes with the musings and philosophies of the CEO and open views of the crowd community. Firm-based Twitter accounts were also examined alongside firm Facebook accounts for each firm. Some of the other web-based resources provided useful additional company material – particularly company events - on Facebook and Twitter, which was also a good source of major and concise firm announcements.

Communications took place often via phone (or Skype) or via emails and these both proved a powerful and immediate link between the informant and me. All informants were followed up with emails with their individual transcription attached and provided feedback – either in writing or via phone (or Skype) to amend or clarify or alter the transcription. Some crowd members (unprompted) followed up with additional information over email and offers for further help.

Image analysis proved to be valuable in terms of seeing images of the firm premises or of firm-based events. One firm even featured a video of an on-premises rock concert organised by the CEO for staff over morning tea.

Company documents such as formal press releases in tandem with public media and press releases formed an interesting part of the research. It was useful to clarify historically when some events had taken place using press releases to piece together firm milestones and helped to collaborate some of the verbal responses provided by executives. Some of the firms had been interviewed publicly on television shows and had presented some of the more exotic and esoteric elements of the business on these shows to help gain publicity.

Archival material, along with conference speeches again provided useful background material in understanding some of the operational aspects of the firm which the executives felt important to outline in public presentations. They were also useful in
providing knowledge of how the company had developed and grown from earlier incarnations of the firm.

6.9 Data Coding Procedures

The study was designed inductively to discover new concepts and phenomena (Siggelkow, 2007). So, true to the study’s inductive essence, I examined the data collected from a grounded and in vivo perspective, whereby themes emerged from the actual field-based material (Gioia et al., 2012). I used pre-existing theories and prequel-phase impression-forming prequel data initially as a guide rather than as basis to shape emergent themes.

Once the interview transcriptions had been checked by the professional transcriber and then subsequently by each informant, I proceeded to conduct a line-by-line in-vivo thematic coding analysis which was recorded manually. To remain true to the data and the inductive flavour, in tandem with using in vivo coding, I also used first order codes, whereby the language used by the informants was used as frequently as possible (Gioia et al., 2012; Van Maanen, 1979).

Once this process was complete, a further line-by-line in-vivo coding analysis was conducted using NVivo 10 software. There was a high degree of congruity between the coding output achieved by the manual process and more automatic process of the software program.

A total of 441 pages of transcripts were produced from the interviews. This included 281 pages for the executive informative group and 160 pages for the crowd informant group. The initial coding provided emerging thematic codes for executives with 63 initial coding nodes with 1,528 individual associated coding references. The crowd elicited 90 initial coding nodes with 1,104 individual associated coding references. The most frequently referenced codes totalled 891 (58%) references among the executive group. These codes included references concerning competitive advantage, size and scale, crowdsourcing, strategy, value and value creation and crowd characteristics. The most frequently referenced codes totalled 563 (51%) among the crowd group. These references included: payment, difficulties, crowd motivation, benefits-beyond-money,
relationships, competitiveness, unfairness, personal view of the firm, benefits, trust, fun, community and extra income.

Using both the codes from the initial manual recording in tandem with the assistance of *NVivo 10* software, the process required continual cross-checking through the codes and the conducting of axial coding whereby relationships and similarities among the codes resulted in some codes being collapsed together. Two senior researchers completed a full independent check of the coding scheme used and inter-rater agreement achieved high congruence (Gioia et al., 2012).

At the same time as the *in vivo* coding work, fine grain tables of significant quotes were also constructed and details regarding each firm were gathered including notes on observations of three firms, Facebook and Web-based company pages and further press interviews conducted by some of the informants (Miles & Huberman, 1994). It became clear that details such as the size of the crowd used by each firm would expand rapidly every month so checking regular up-to-date website based information such as this detail was considered critical.

Other data was also collected and formed part of the coding tranche of work via field notes. Some informants were also approached in person at an industry conference and discussions took place in an open public setting. Such participant observation data elicited a deeper level of understanding regarding the crowdsourcing phenomenon context (Schutt, 2006).

**6.10 Data Analysis Procedures**

The data was initially analysed utilising open coding (Glaser & Strauss, 1967; Strauss & Corbin, 1998). The open coding was used *prima facie* to identify, then thematically designate a ‘tag’ and then subsequently categorise the *in-vivo* transcribed interview data. The transcribed interview data was initially coded manually into thematic nodes. The data was also analysed using observations among emerging data, themes, concepts and dimensions.

Most significantly, this whole data coding and analysis process resulted in building a data structure. The data structure featured first order concepts refining to second order
themes and then resulting in a finalised aggregate of dimensions (Gioia et al., 2012). This ordered data structure is presented in detail in the Findings chapter (Figures 7.1 and 7.3).

Creating the data structure was a fluid process and honoured the tradition of inductive research. The data appeared to naturally fall into three major categories (aggregate dimensions) resulting in a view that the data relating to the crowdsourcing firms could be divided into its essential characteristics, that is, what it is; and into its essential functioning, that is how it works; and thirdly, into its value characteristics and benefits. These three dimensions help provide grounded data toward understanding the research questions around crowdsourcing essential features, essential functional practices and value elements.

6.11 Assessing the quality, rigour and reliability of the data

Despite the advantages of the case study method, its reliability and validity may still remain in doubt (Riege, 2003). In addressing the need for data to be beyond reproach and the study to elicit a modicum of objectivity, the elements of the study speaking to validity and reliability have been summarised in Table 6.5 below.

In compiling the summary in Table 6.5, I have followed guidelines set by established scholars in relation to data quality, rigour, reliability, and validity issues. Scandura and Williams (2000) include elements of internal validity, external validity and construct validity as being critical to any study’s research strategy tied to data collection. They define internal validity as establishing causality via a cause-effect relationship; external validity as fostering generalisation across settings, time periods and individuals; and construct validity as the appropriateness of the study’s measures to fit theory being examined. Reliability is a fourth measure which demonstrates operations can be repeated with the same results (Gibbert, Ruigrok & Wicki, 2008; Reuter, Foerstl, Hartmann & Blome, 2010; Yin, 2009).
### TABLE 6.5
Validity and Reliability - through the course of research
Based on Gibbert, Ruigrok & Wicki (2008); Reuter, Foerstl, Hartmann & Blome (2010); Scandura & Williams (2000); Yin (2009).

<table>
<thead>
<tr>
<th>Reliability/Validity Criterion</th>
<th>Research Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reliability</strong> (demonstrating that operations can be repeated with same results.)</td>
<td><strong>Design</strong></td>
</tr>
<tr>
<td></td>
<td>Strict case study protocol developed. Repeatability of interview questions was established and used. Survey interview questions mimic the oral interview questions. Observations and interviews were recorded and accurately transcribed, a case study file was maintained.</td>
</tr>
</tbody>
</table>

| **Internal Validity** (cause preceded effect and alternate explanations are able to be discarded.) | **Impression-forming online exercise and previous value creation literature, theoretical frameworks/ models used as a starting point. This helped to establish progressive explanation-building potential.** | **Triangulation from double-source (CEO & other mostly C-level executives) as well as crowd members in firm to maximise data richness; firms from four countries; crowd from 5 developing and 5 developed countries; all SMEs. One ‘polar’ case.** | **Multiple informants utilised; Study ensured checking of interview accuracy with all informants post-facto. Informants could alter interview transcription after the fact. Regular peer debriefing was conducted.** | **Triangulation of case study interview and other secondary data; Discussion between authors to attain inter-rater agreement.** |

<p>| <strong>Construct Validity</strong> (establishing correct operational measures for the concepts) | <strong>Study established chains of evidence with multiple informant</strong> | <strong>Case studies to develop theory and so qualitative research justified</strong> | <strong>Triangulation demands multiple sources of</strong> | <strong>Interviewees all reviewed case protocol including</strong> |</p>
<table>
<thead>
<tr>
<th>being studied)</th>
<th>groupings, data sources and units of analysis. Study ensured link between initial study questions and the case study procedures including informant type and units of analysis. The types of firms and the circumstances of the evidence to be collected was established prior to data collection efforts.</th>
<th>due to nascence of crowdsourcing phenomenon. Information; multiple interviews. Interviews and documents will be the basis of evidence.</th>
<th>ethics.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External Validity (generalising across time, settings and individuals).</strong></td>
<td>The sample scope was consistently within crowdsourcing firms as a major business model &amp; all firms were small to medium size and less than a decade old so each firm provided the basis for replication logic across the 8 firms. Interview questions/ survey questions were replicated across both groups. Extant literature provides a basis for comparing evidence as well as impression-forming prequel stage.</td>
<td>The study presented a clear description of case firms’ context and description. One ‘polar’ case included to help amplify similarities or uncover differences to maximise learning.</td>
<td>Data gathering in the study utilised comparison of secondary data to assist triangulation. The study’s data is earmarked to be used to establish future-testable propositions.</td>
</tr>
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</table>
6.12 Ethical considerations

Since the overall research design for this study involved conducting multiple case studies and using a variety of data sources such as interviews, on-site participant observations and document analysis it necessitated a thorough human ethics review by The University of Melbourne's Human Ethics Research Committee (HREC). This review application was approved.

All participants were given an explanatory statement (see Appendix D), notifying them of the co-ordinated review and details of persons to contact in case they desired further clarification. Before the commencement of each interview, participants were asked to sign an informed consent form (see Appendix E) and were informed that their participation in this study was purely voluntary and they could withdraw at any stage and that their identity would remain confidential.

A second ethics review was conducted when it became apparent that some crowd members would only structurally participate if they were paid a modest amount. This second ethics review, which differed from the first ethics review only because it included the addition of payment to a limited number of informants, was approved.

6.13 Chapter summary

This chapter restates each of the research questions and situates them in a positivist/objectivist philosophy. The research questions are:

RQ1: How is crowdsourcing practised and conceptually characterised in terms of essential features in crowdsourcing-centric firms?

RQ2: How does crowdsourcing create value for the key participants in crowdsourcing transactions?

This chapter provides a detailed explanation on why this study is justified, adopts a prequel phase, a multiple case study design and subscribes to the qualitative interpretive paradigm. In addition, this chapter outlines the fieldwork for this study which
incorporates site visits, observational data and interviews with knowledgeable experts in the field and capable of rich description as to how crowdsourcing is practised as well as its value drivers. This phase uses eight case studies, including one ‘polar’ case. The case studies were conducted across four countries in multiple industries and using dual viewpoints of the firm’s executives and each firm’s crowd comprising individual informants. The interviews with the crowd were also supplemented with other crowd members’ additional written qualitative surveys.

This chapter also outlines that the unit of analysis was dependent on each separate research question. The first question relating to how crowdsourcing is conceived and practised in crowdsourcing firms utilises the phenomenon of crowdsourcing as its unit of analysis. The second research question adopts a more sophisticated approach by using the individual and the firm as its two-pronged unit of analysis.

The data for this study was collected through diverse sources such as multiple site visits in two countries, interviews, qualitative surveys, participant observations, web-based content and material from a major industry conference. The analysis was conducted inductively using open and later axial coding. Both a manual recording method and NVivo 10 software were used in the analysis and cross-referenced. A thematic analysis emerged from the data which informed to create concepts, themes and dimensions.

Finally, the chapter outlines ethical considerations and examines how the study has addressed the quality, rigour and reliability of the data by discussing the triangulation of the data and by providing a detailed table on how this study has dealt with issues of reliability, internal validity, construct validity and external validity. The next chapter discusses the results of the findings of this study.
7. FINDINGS –THEMED CONCEPTS & HIGHER ORDER DIMENSIONS

7.1 Introduction

This chapter reports on the findings of the study in tandem with some of the findings from the initial impression-forming prequel stage.

The findings are broken into two chapter sections. The first section (Findings 1) provides an elaborate data structure incorporating thematic findings from the interviews data source. The findings evolve from the firm/crowd interviews and other data source material.

The second Findings Chapter (Findings 2) sections present findings specifically which address each of the two research questions in greater depth (the order of research questions are reversed in terms of the findings to reflect the relative importance of the second question):

RQ2: How does crowdsourcing create value for the key participants in crowdsourcing transactions?

RQ1: How is crowdsourcing practised and conceptually characterised in terms of essential features in crowdsourcing-centric firms?

The data from the first section of the findings, that is the resulting themes and the higher order aggregate dimensions, also feed in to inform the findings against both research question findings sections (Findings 2).

These above research questions are clearly ‘how’ exploratory questions and are suitable especially for unexplored phenomenon like crowdsourcing (Anteby, Lifshitz & Tushman, 2014). The first research question elicits more descriptive elements and the second research question elicits more analytical elements.

Bettis et al. (2014) outline that qualitative methods can begin inductively with more open-ended questions regarding unexplored phenomena with a goal of providing insights that inform scholarship in a more general manner.

In terms of the first section of the findings, data source materials, chiefly represented by the interviews, are presented thematically and ordered by a data structure comprising
first order themes and second order concepts resulting in summarised aggregate dimensions. In seeking to answer the above research questions, the study provides an initial thematic schema, which breaks down to higher order aggregate dimensions based on analysis of line-by-line in vivo coding and later axial coding to bring about more refined concepts. The initial themes have emanated directly and as faithfully as possible from the informant’s in vivo interview transcriptions. Such informants, for the purposes of these findings, are considered ‘knowledgeable agents’ and are also considered capable of knowing and understanding what they are convening at interview and can suitably express their thoughts, feelings and intentions (Gioia et al., 2012). Proof tables are also presented as evidence for the forming of the basis of the emergent themes.

The Findings 2 Chapter covers the first research question and provides some findings based on the emergent themes on what crowdsourcing is and how it functions in firms. Some of these findings work in tandem with the findings from both the Findings 1 section emergent themes and from the initial impression-forming prequel stage.

Furthermore the Findings 2 Chapter addresses the second research question and again the emergent thematic data structure highlighted in Findings 1 feed into findings against value creation and crowdsourcing. Some value creation models emerge from the findings based on the Findings 1 material. So that once the themes, concepts and dimensions were clearly ordered in a data structure at the beginning of the Findings 2 Chapter, the next step could result in an inductive framework. This framework can be clearly linked to and is indeed grounded in the precursor theme-concept-dimension data structure. A second derivative framework was further refined from the initial model. Both frameworks convey general concepts about the nascent phenomenon of crowdsourcing derived from and grounded in the data collected. The concepts in these frameworks linked directly to value creation drivers derived out of the data.

7.2 Findings - Part 1

7.2.1 Thematic concepts and higher order dimensions - coding

As mentioned in the previous chapter, the transcriptions of the interviews totalled 441 pages, which comprised 281 from firm executive informants and 160 pages from crowd informants. The executive interviews were initially manually coded into 63 code nodes (themes) and the crowd interviews were coded into 90 code nodes. These codes
were later analysed using NVivo 10 qualitative research software to assist with further sorting and sense-making of the data.

These collective 153 code nodes from both groups of interviewees were selectively coded and cycled via axial coding to be further refined and collapsed into 28 first order concepts. These 28 first order categories were completely informant-based and arose from in vivo line-by-line coding. After further analysis I categorised the 28 first order concepts to ten second order themes to form the basis of the emergent framework concerning the phenomenon of crowdsourcing and how it creates value (Gioia et al., 2012). Further corroborating archival, image-based and observational data were also included periodically to add further weight to evidence for each theme.

The effort to keep to the ‘spirit’ of grounded research fostered a reticence to impose existing literature constraints too early in the data coding to allow the data to fall where it would and thereby encourage a ‘purity’ of findings – free from pre-existing theoretical bias (Eisenhardt & Graebner, 2007). Clearly, however, the interview questions were based on the research questions and so constructed to gain an understanding of ‘academic research into the phenomenon of crowdsourcing and how it creates value for business.’ Responses to such questions naturally elicited responses which thereby assisted in uncovering aspects of the phenomenon of crowdsourcing and how and where it creates value.

Figure 7.1 (below) is a data structure that outlines the informant-based first order concepts leading to second-order themes – albeit not intending to convey cause and effect. The second order themes inform the emergent grounded theoretical framework for understanding the type of business crowdsourcing firms are, how they are designed and operate and what value they create. These second order themes emanate from key informant quotations from both groups. Table 7.1 (further below) displays the informant quotations which relate directly to and help validate the second order themes.
The firm was born crowdsourcing
Crowds in crowdsourcing firms are sourced from organically-formed, pre-existing crowd communities

1. Crowdsourcing-born firms form from pre-existing, organically-formed crowd communities.

Crowdsourcing is a new and unique type of business
Crowdsourcing firm owners think differently
Crowdsourcing firm owners are pioneers

2. Crowdsourcing firm owners are pioneers and trailblazers

Crowdsourcing firms are disrupting industries
Crowdsourcing firms are highly innovative

3. Crowdsourcing businesses are innovative and disruptive to other businesses

The crowd itself can offer highly innovative solutions
Scale and size of crowds attracted by crowdsourcing firms are great
Waste or excess or inaccurate production of crowd effort is handled efficiently

4. Crowdsourcing incorporates efficient transactional processing of large numbers of people and jobs and/or projects

Crowdsourcing firms represent an activity system or business model innovatively incorporating demand & supply elements
Crowdsourcing firms would falter without all parties including company, client and crowd participating
Large crowd numbers are important in crowdsourcing firms

5. The crowdsourcing business, its clients and its crowd are all essential elements to successful operation

Crowdsourcing is a global Internet-enabled business and always on
Most countries in the world now participate in crowdsourcing
Crowdsourcing work is available to most people who are willing to participate. Crowds may experience difficulties and unfairness

6. Crowdsourcing is available at all times to people willing to participate

Crowdsourcing firms are faster, better, cheaper and reduce risk for clients
Crowdsourcing firms are global and always available
Crowdsourcing firms operate at huge size & scale
Crowdsourcing firms can have a social benefit which also generates profit

7. Crowdsourcing offers a competitive advantage over traditional businesses

Crowdsourcing firms offer more choice to clients
Crowdsourcing firms enable superior service offerings
Crowdsourcing firms offer participatory client engagement
Crowdsourcing firms enable unprecedented scale over short-term periods

8. Crowdsourcing offers tangible benefits and exceptional value for clients

The crowd may attain employment, income, career/personal development, a better life, esteem, a creative or philanthropic outlet, work-life balance, 24-hour global timeframe, a time-filling, alternative employment or payment currency avenue as well as learning, teaming-, client-building- and leadership-opportunities.

9. Crowdsourcing fosters various types of value for the crowd

Firm must establish a form of relationship and curate a level of trust with the crowd.

10. Firm and crowd relationship is important.
7.3 A first look at the data structure and its link to the research questions

Figure 7.1 above provides a first look at the thematic data and its categorisation and ordering. In Figure 7.1, under ‘second order themes’ heading the data is divided into common thematic blocks of three or four groupings. The first three-theme block grouping (items 1-3) relates most closely to the second part of the first research question in terms of the conceptualisation of essential features: How is crowdsourcing practised and conceptually characterised in terms of essential features in crowdsourcing-centric firms?

The second three-theme block grouping (items 4-6) under ‘second-order themes’ in the data structure in Figure 7.1 relates most closely to the first part of the first research question in terms of crowdsourcing practices including functioning and operationalization: How is crowdsourcing practised and conceptually characterised in terms of essential features in crowdsourcing-centric firms?

The final four-block grouping (items 7-10) under ‘second order themes’ in Figure 7.1 most closely provides findings against the second research question: How does crowdsourcing create value for the key participants in crowdsourcing transactions?

In terms of how the second order themes relate to each other is inherent in how they were finally grouped. The first three second-order themes included:

1. Crowdsourcing-born firms form from pre-existing, organically-formed crowd communities;
2. Crowdsourcing firm owners are pioneers and trailblazers; and
3. Crowdsourcing businesses are innovative and disruptive to other businesses.

These three second order themes appeared to be the most thematically similar around the fact that these are novel, unusual and possibly disruptive with descriptors in this same line of thematic congruence: ‘crowdsourcing-born’ and ‘pioneers’ and ‘trailblazers’ and ‘innovative’ and ‘disruptive’. These descriptors seemed most starkly to characterise crowdsourcing.
The second block of second-order themes included:

4. Crowdsourcing incorporates efficient transactional processing of large numbers of people and jobs and/or projects;

5. The crowdsourcing business, its clients and its crowd are all essential elements to successful operation; and

6. Crowdsourcing is available at all times to people willing to participate.

These seemed to relate to each other because they revolved around how crowdsourcing functionally operated. Crowdsourcing could simply not function without the processing of large numbers of people/tasks, ubiquitous availability and a crowd of willing participants. These factors are non-negotiable elements of the workings of crowdsourcing and are essential operational elements. Hence they were grouped together. It appeared to be immaterial to the essential functioning of crowdsourcing whether the type of crowdsourcing was tournament-based (contest oriented with one winner) or collaboration-based (a collective end-result built from component individual crowd member effort) (Afuah & Tucci, 2012).

The third and final block of second-order themes included:

7. Crowdsourcing offers a competitive advantage over traditional businesses;

8. Crowdsourcing offers tangible benefits and exceptional value for clients;

9. Crowdsourcing fosters various types of value for the crowd

10. Firm and crowd relationship is important.

These appeared to most consistently relate to each through delineating what crowdsourcing offers and seems to be most directly concerned with value drivers. These indicate most consistently what firm/crowd/client receives through crowdsourcing. As a result these formed a natural grouping.

Clearly, however, whilst the research questions relate most closely and in a more concentrated manner to the specific groupings as specified above, the second order thematic items are not exclusively the domain of such a neat categorisation. Therefore,
there is still a possibility to link value creation to the third ‘second order theme’ for example. So, the categorisations presented above are not mutually exclusive across both research questions.

Findings 2 and 3 chapters following will provide in-depth content against the findings more substantially in relation to the research questions.

7.4 First order concepts: Substantiation through informant quotes

One of the key intents of the findings section is to drive toward concept development and theoretical exploration and discovery through careful presentation of evidence informed closely by the data (Gioia et al., 2012). Eisenhardt and Graebner (2007, p.29) state:

*In a single-case study, the challenge of presenting rich qualitative data is readily addressed by simply presenting a relatively complete rendering of the story within the text. The story typically consists of narrative that is interspersed with quotations from key informants and other supporting evidence. The story is then intertwined with the theory to demonstrate the close connection between empirical evidence and emergent theory. This intertwining keeps both theory and evidence at the forefront of the paper.*

In keeping with Eisenhardt and Graebner’s (2007) and Gioia et al.’s (2012) notions of careful presentation of the ‘proof’ data against emerging concepts key informant quotations and other evidence are tabulated below.

In terms of providing evidence relating to each of the 28 first order concepts it was necessary to construct a form of proof that such concepts were constructed from real field sources and directly in some cases to actual *in vivo* interview transcription. This fits with the notion that the informants are recognised and operationalised as ‘knowledgeable agents’ in the study (Gioia et al., 2012). Each concept is clearly tied to grounded proof emanating from the ‘knowledgeable agent’. In some cases proof was also substantiated by providing data gained from secondary sources such as the firm’s website or field observations.
Both firm and crowd perspective are used throughout the attempt at proving concepts against interview quotes. Presenting both viewpoints is particularly salient, and indeed necessary, for deriving the concepts relating to value creation and relational aspects of crowdsourcing. A minimum of three proof quotations sometimes in combination with secondary data is presented for each concept.
TABLE 7.1
Informant quotes combined with archival and observation data which substantiate second order themes

Theme 1: Crowdsourcing-born firms form from pre-existing, organically-formed crowd communities.

<table>
<thead>
<tr>
<th>First order concepts</th>
<th>Substantiating Informant Quotations, Archival and Observation Data illuminating Second-order Themes</th>
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<tbody>
<tr>
<td>The company was born crowdsourcing</td>
<td>‘It wasn’t a company doing normal things and then adding crowdsourcing to its repertoire, it was a company that was born crowdsourcing.’ (Chairman, Firm F).</td>
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<td></td>
<td>‘Basically our entire business model is built on the premise of crowdsourcing.’ (CTO, Firm A).</td>
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<td></td>
<td>‘We don’t have a high turnover of successful freelancers. We have a lot of people continuously signing up, and so there is in fact always and always has been, and I suspect always will be, an over-supply of freelancers. There are many more freelancers than there are jobs.’ (CTO, Firm E).</td>
</tr>
<tr>
<td>Crowds in crowdsourcing firms are sourced from organically-formed, pre-existing crowd communities.</td>
<td>‘it’s [the crowd] kind of an organic being, like you have to be very delicate with it... people will start to feel, like ‘oh ok this is really what this is about, they are always marketing to us’...You know for four years like we really just kind of treated it like we built this entity that people like to hang out at, you know think if you put a public park and it got really you know, like really, really popular, it was like an important part of the city, like you would never, like all of a sudden, like make people have to pay to go there, right. We made sure that it like stayed how it needed to be and the way that, if we needed to make more money, then we just figured, ok how is money coming in now, and we’ll just try and scale that versus like, you know try to shove marketing down people’s throats.’ (CCO, Firm G).</td>
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<td>‘He sketched on a napkin an idea of you know, how he could build a crowdsourcing community of software development enthusiasts, their ideas and then using that same crowd to kind of you know, find the best ideas, collaborate with the crowd and then ultimately fund those ideas based on the crowd perspective.’ (CEO, Firm C).</td>
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Theme 2: Crowdsourcing owners are pioneers and trailblazers.

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<tr>
<th>First order concepts</th>
<th>Substantiating Informant Quotations, Archival and Observation Data illuminating Second-order Themes</th>
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<tbody>
<tr>
<td>Crowdsourcing is a new and unique sort of business</td>
<td>‘I mean we’re in an industry that didn’t exist five years ago, and even today, it’s still a burgeoning not-that-well-known buzzword, I still can’t really describe to my mother what it is that we actually do.’ (CTO, Firm D).</td>
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<td></td>
<td>‘Yes, and when we launched our community, we didn’t actually know, we didn’t have a term for it. So you know, we were doing it, but we didn’t know it was crowdsourcing until Jeff Howe who wrote the crowdsourcing book contacted us and said: “hey, you guys, you’re crowdsourcing, I’d like to write about you in our book” and we’re like, “that’s great, now we can kind of define what we’re doing”’. (CMO, Firm B)</td>
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<td></td>
<td>Yes. I think a good way to think about is you know, if you’re looking at a traditional MBA model of how you grow a business, we definitely go against those traditional models, and we do that for a reason, we feel like regardless of the country and what needs there are</td>
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there, we always seem to find a large group of hungry well-educated individuals that need work, and we find they do great work, you know, we couldn’t, we’re not – we’re actually really what should I say - blessed by them, we feel fortunate to have these people (CFO, Firm C)

Yes, it’s meant to be a hybrid model between the two – outsourcing and crowdsourcing…We do for sure, yeah, we have – obviously we think we’re unique in many ways (CEO & Founder, Firm C).

But it’s not like the whole world understands that they should solve their business problems with crowdsourcing, and you’ve been to CrowdConf, you know, it’s the world’s biggest crowdsourcing conference and there’s only 600 people there, and oh by the way they’re not just talking about micro-tasking they’re talking about crowd funding and crowd innovation and O-Desk and we see the people who sell $500 projects instead of $5 or 5 cent projects. So this is still an underground technology and we are selling to a very exclusive group of people. (CFO, Firm D).

From Observation Notes: The businesses portrayed themselves as ‘cool’, non-traditional and somewhat mysterious. Of the three firm sites visited (two in USA and one in Australia) all were extremely difficult to find, had no signage and were in ‘creative’ locales in their respective cities. No-one wore suits and it proved difficult to find who was senior in the company even after wandering around for a while in one firm. There were empty pizza boxes and soda cans in great supply across the office floor in one firm and in the second firm a number of staff seemed to be enthusiastically involved in stacking a multitude of beer into a fridge mid-morning. A fourth site was visited online via a link sent from an enthusiastic staff member who entreated me to watch the whole thing. It portrayed all staff participating in an in-office rock concert being held in the morning with all staff attending…A Google search of this firm’s CEO’s name revealed his own name had a .com website attached to it with sub-heading ‘Coolest dude on earth’ (July, 2013).

Crowdsourcing business owners think differently

‘He kind of wasn’t encumbered by those pre-definitions about what would work and what wouldn’t work, but also unencumbered by you know, like set rules and regulations and would really challenge the team to go – well how can we get around this, what would be the opportunity’ (CEO & Founder, Firm B).

Yes, I think we’re a little different, there are other competitors in this space.. I mean you know, companies like that in that realm I think we would consider you know, even sometimes, you know maybe partners with some of them, it’s still I think we like still have something pretty unique from our competitors. I think everyone (here) is doing something a little differently. (Bus Mgr, Firm B)

‘But that’s where we are massively, massively different from any other player. Because every other player has a crowd, and they try to recruit a crowd and curate that crowd so that their crowd has particular competencies. And we don’t do that at all, we use the crowd, not a crowd. So we make our work available anywhere where there is a community.’ (CFO, Firm D).

‘There’s a few copycats out there that kind of duplicate our model, but none of them have ever really reached scale. I think it’s easy to just say we have technology platform that anybody could build you know, because it’s actually pretty simple software-wise to put out - just upload a design and vote on it, but the secret is really in the people using it, and it’s very hard to get access to the artist community, like we’ve been able to do over the years’ (CEO & Founder, Firm G).

Crowdsourcing business owners are pioneers

‘So what we’ve done is you know, I think what we’ve done you know, is really pioneered the application of crowdsourcing or you know a group of people solving a common problem’ (CTO, Firm A).

‘Yes, and I think we were a bit of a trail-blazer, so I think that the people that started other
Crowdsourcing companies following that were members of our community, watched our successes and failures and kind of took that into their own ventures and knew what worked and what didn’t work too, so I think we were definitely breaking new ground.’ (CEO & Founder, Firm B).

Crowdsourcing is a big craze today, but local startup, (Firm B), has been in the space since 2009, working with early adapters to help them use the power of crowdsourcing to gain actionable insights on their business. (Company website, Firm B, 27 September, 2012, News).

(Firm B’s CEO) is an accomplished and highly successful entrepreneur. After years of pioneering work in the emerging field of crowdsourcing, she founded (Firm B) in 2009, helping clients such as P&G, University of Oxford, American Airlines, and Orange Telecom to gain a new level of market intelligence through crowdsourcing. (Company blog, Firm B)

So that is, I know you probably looked at other companies, I think that (we are) unlike every other company (CFO, Firm C).

Image from firm public presentation at Internet Retailer Conference and Exhibition in June 2011 by Firm G CEO:

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<th>First order concepts</th>
<th>Substantiating Informant Quotations, Archival and Observation Data illuminating Second-order Themes</th>
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| Crowdsourcing businesses are disrupting industries | ‘But I would say, at its heart, we have used crowdsourcing as a way to disrupt an industry, you know, like graphic design, you know. Previously people were limited to you know, maybe three or four concepts from a single designer you know, maybe it was their nephew or their niece, you know, maybe it was a student, maybe it was a graphic design shop down the road.’ (CTO, Firm A).

‘So when you move to crowdsourcing you’re only paying for what you see, you’re paying for the output, and typically something that took two hours with traditional BPO, we can bring that down to potentially forty minutes, thirty minutes, just because of our parallel processing.’ (CFO, Firm D)

‘So it’s very disruptive in terms of what we are able to pay, and then you start saying we’re going to pay that same amount in rural parts which is just huge.’ (CEO & Founder, Firm D).

I think ours is one of the first companies to be able to allow for that. This broke a lot of new ground for us and it kind of fits into mediated logo t-shirts which is what we were trying to do when we started the business. (Bus Mgr, Firm G).

Crowdsourcing businesses are highly innovative

‘Right and so we believe that you know, we’ve done something good in flipping that model on its head saying well actually the only thing that should matter is the quality of the work’
But we’re definitely by far the biggest, you know, we’re the company in the States that really innovates on it, and generally what happens is we will keep pushing the model forward, trying to solve the sort of pain-points and friction points and then we see the rest of the people sort of following suit and trying to – you know, copy what we’re doing’ (Product Manager, Firm A).

What we're really doing is we're opening up a whole area of the market that didn't really exist before. So if you're cafe owner for example, and you want to get a website built, in the past you might not be able to afford $5,000 to get a website built. But now you can go online and get a website for $100 or $200; that will perfectly suit your needs.’ (CEO & Founder, Firm E).

The thing about this business that we’ve realised is it’s always, it’s going to be innovative, innovating over time, so the things that we’re going to be doing for companies three years from now, probably haven’t even been thought of yet, so we’re constantly kind of looking for the new ways to use the technology. (CEO & Founder, firm E).

I think the fact that we were the first player in the States, and that we’re still here and that we've grown the community to hundreds of thousands.’ (Bus Mgr, Firm G).

<table>
<thead>
<tr>
<th>The crowd itself can offer highly innovative solutions</th>
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<tr>
<td>Like there was one competition recently that I was entering and it like, very quickly people found it - a new data solution, it was about locating whales based on the sounds that they make, I like whales. (Y, Crowd, Firm F).</td>
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*In less than a week a glaciologist from Cambridge had produced an algorithm that out-performed those developed in over a decade of research in the space agencies.* (Crowd member, Firm F).

Australian Broadcasting Commission, Catalyst Science Program Broadcast, August 2011, [http://www.youtube.com/watch?v=g6X3zUwvwu](http://www.youtube.com/watch?v=g6X3zUwvwu)

I think there’s a lot, there’s no creative boundaries for the t-shirt as a canvas – because you have to wear it every day, and you do have, and it’s a form of expression unlike any other canvas I believe, so that – and also t-shirt as a price point is very accessible to the masses, so it’s like a piece of art that you carry around with you without paying hundreds or thousands of dollars for a canvas that you actually put like on a wall (Bus Dev Mgr, Firm G).

My favourite is actually probably for the HF, building algorithms that automatically graded essays, high school essays, so these are all essays that are being graded by two teachers and we built an algorithm. We had a competition to build an algorithm that could out-perform whatever the teachers could do. (CEO, Firm F).
Theme 4: Crowdsourcing involves handling lots of people and jobs/projects efficiently

<table>
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<th>First order concepts</th>
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| Scale and size of crowds attracted by crowdsourcing firms are great | ‘I mean we have designers in 192 countries…we’re way bigger than anybody else, so that’s great.’ (Product Mgr Firm A).  

First, scale. The . platform can handle crowds of a million participants or more — something we’re already planning for this year with clients. Second, our software is fully enterprise-ready, enabling us to offer secure integration for large, complex global organizations — we’re constantly adding to this capability. Together, the two pieces create a platform for massive, globally-dispersed crowds to drive the kinds of disruptive and innovative outputs that were only notional as recently as three years ago. (CTO Interview featured on company website, Company B)  

‘We have proven that we can do this on a massive scale where we’ve done a project upwards of 720 million tasks.’ (CFO, Firm C).  

‘I think it just was obvious in the sense of scalability you know, as K was saying, you know, the general model of – there’s a demand for talent, and there’s supply of talent, and we’ve found this model of giving people some training, giving them an opportunity, and plugging into the local economy and we wanted to scale that, you know we wanted to say great we can hire fifty people, but can we do a million.’ (CEO, Firm C).  

We’ve got 7 million users, we could have 700 million users and still be getting going right. In fact the other 5 billion people on this planet are going to be potentially customers for us, and many of them also want to get a job so you know, we’re in a very good position in terms of the way things are heading with Internet growth and so on, so we just focus on keep getting growth up there, keep the revenue up in triple digit realm if we can. (CEO & Founder, Firm E). |
| Waste or excess or inaccurate production of crowd effort is handled efficiently | (Firm D) can produce several years of work per day. (CEO & Founder, Firm D).  

‘Here’s the thing - once the competition is set up and going, it’s all automated.’ (Data Scientist, Firm F).  

‘Yes, but so with the leaderboard, I’ll get 80% accurate, you’ll get to 85, I’ll keep working until I get ahead of you, and you keep working until you get ahead of me, and that pushes us to perform better than if we were working on the problem by ourselves. Does that make sense? And so that’s a characteristic of (Firm F) that is different.. there’s a level of objectivity.’ (CEO & Founder, Firm F).  

Yes, working with accuracy label means on the red job – that means your accuracy is bad, and are not able to work a whole week. We would be given a chance in the following week so that we can increase our performance. Yesterday due to low accuracy 25% or 667 workers have been disabled (from company Internet connection). These 667 are workers who will now get a chance next week to redeem themselves. (J, Crowd, Firm C). |
| Crowdsourcing is a new employment avenue involving participating and at times self-managing crowds | ‘In the past thirty days alone we paid out $1.6 Million to graphic designers.’ (Product Mgr, Firm A).  

‘(We have) 200,000 designers, all over the world and we’ve paid out over US$45 Million…We’ve completed about 175,000 projects.’ (CTO Firm A).  

‘I think the numbers are – there’s 700 Million now in terms of jobs that have been posted that have gone through the system in total which breaks down to about four Million Projects, but the – yes – and the average project there is under $200.’ (CTO, Firm E).  

‘But it really depends, I mean we now have something like 600 different categories of...
projects’ (CTO, Firm E).

‘So you end up with 87 data points that they need, and on that particular job, which we did in three weeks, we had 120 million-plus individual human actions, with 37 different job types, task types.’ (CFO, Firm D).

Theme 5: The crowdsourcing business, its clients and its crowd are all essential elements to successful operation

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| **Crowdsourcing businesses represent an activity system or business model innovatively incorporating demand & supply elements** | For customers (Firm D) adds value by providing a scalable workforce and high quality workers. For crowdsourced workers (Firm D) establishes a meritocracy and allows the workers to earn more and more money. (CEO & Founder, Firm D).

If by clients we mean users of our website, we have 6.7 Million that have signed up to the website to date. At any given time, point in time there’ll be something like 12,000 (clients) online… there’s 700 Million now in terms of jobs that have been posted that have gone through the system in total which breaks down to about 4 Million Projects.’ (CTO, Firm E).

‘People largely find and build businesses often on the back of (Firm E’s crowd) and those people have ongoing existing relationships where they’ve got a business that is completely being run by (the crowd), or at least big chunks of it, say for instance the entire technical back end might be run by (the crowd).’ CTO, Firm E).

‘There’s two key areas that we participate in, or that we play in, the first one is the community that we created – I kind of use the metaphor like tents if you’re looking at it like tent poles or if you look at it on a graph, the first graph that’s peaking like a bell curve graph is the community participation and the creative community, the interaction of (Firm G) creating a cyber-community of friends, of people that are just passionate about visual arts and graphic design… the second value that we add to our community and our customers, so the ones that voted that design highly can actually purchase it and support it and align you know, and visualize the fact that this is the type of artwork that I love’. (BDM, Firm G).

| **Crowdsourcing businesses would falter without all parties including company, client and crowd participating** | ‘They (clients and crowd) certainly overlap but we each, each party has their own unique interest that they are also trying to pursue, right, and what is really great for the client is not necessarily great for designers and so because of the two sided marketplace and the money that is primarily coming from the client side, it’s very easy for the company to fall into a trap of just solving customer problems, oh well if we solve these problems we could drive more business and we’ll make more money for the business and all of this sort of stuff and that is fine, you have to do that too, but the reality is without the designer community there isn’t a business either, so even though they are not directly paying us money, the business doesn’t exist without them, so I thought it was really important to have somebody looking out, after that side of the business.’ (Product Mgr, Firm A).

‘Yes, you’re going to get that overlap of people (crowd and customer). Initially everybody is going to be a customer you know, because those are going to be the only people you can market to. I mean they are the ones who participate. So you know, obviously there’s some people who are going to be like all customer and no participation or all participation and no customer, but there’s always going to be a good enough amount between the two to have the business be healthy. (CCO, Firm G).

‘Yes, I think it’s a combination of both, so we certainly have a lot of clients that are growing quickly just like we’ve grown up 100 times over the last eight months in terms of our number of tasks that we’ve done, eight months ago we were only doing five thousand tasks a week and today we’re doing five million tasks a week, so we grow as our clients are growing, and fortunately we have some very high growth clients.’ (CEO & Founder, Firm E).
Large crowd numbers are important in crowdsourcing businesses

(Screenshot, Firm A, Public Website).

‘There are 100 million people that are members of communities at which (Firm D) work is available, 14 million of them have at some time or another looked at one of our tasks to decide whether they wishes to do it or not. Four million have actually done tasks for us, and on the average day we have 20,000 – 25,000 new people and we have no idea who they are, they are just an IP address.’ (CFO, Firm D).

(Screenshot, Firm D, Public Website).

‘Well I mean we’ve huge liquidity in the market place, so we’ve got 7 million users.’ (CEO & Founder, Firm E).

Theme 6: Crowdsourcing is available at all times to people willing to participate

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| Crowdsourcing is a global Internet-enabled business and always on | “Yes, so we’ve still got quite a large contingent in the United States, but we also have you know, a big population of designers in Indonesia, the Philippines, and then Eastern Europe as well, so countries like Bulgaria, Serbia, Romania.’ (CTO, Firm A).  

‘The crowdsourcing allows us to tap people with different skills for us right. They come from different backgrounds, and I mean the opposite of crowdsourcing would have been if we had employees, if we had employed those people in-house, right. But everything cost-related would have been like prohibitive, like we had to pay for their management costs, administration costs, right, now what crowdsourcing allows us to do is access experience of these people remotely over the internet’ (Product Mgr, Firm C).  

‘Look that soft platform that manages everything from worker retention and grading to setting up gold standards for testing, worker reputation engine, so we definitely provide that, some of them have – in terms of hardware some of them have their own, some of them go to internet cafes.’ (VP, Bus Dev, Firm C).  

‘The customers are about 60% outside the US, and the crowd, the community that submits and scores designs are more international, like more like 70% international. But there is not like one demographic, I mean it’s anywhere from high school students to art directors at agencies, to even like, we’ve printed people in their sixties, it’s kind of all over the place.’ (CEO, Firm G)  

‘The big difference is that we’ve got a lot of (crowd) coming from Eastern Europe, Indonesia, Philippines, which is not big customer markets for us, but big (crowd)
community. Brazil is a big (crowd) community. Chile, the UK. The UK is quite big for us in terms of artist community because of the focus on art. We’re starting to break through in Asia a little bit. We’re seeing like the Asian community – the oriental Chinese, Asian community starting with the very artistic, but we’ve never really marketed ourselves there, so we think that there’s a lot of growth in these regions for us once we get a foothold in there.’ (BDM, Firm G)

Most countries in the world now participate in crowdsourcing

‘I mean we have designers in 192 countries. You know, they – up until very recently the largest community of designers was in the US and recently that was eclipsed by Indonesia, and we have large populations in like Eastern European countries, the Philippines is a pretty big one, Australia, Canada’ (Production Mgr, Firm A).
‘Our workforce is in over 80 countries.’ (CEO & Founder, Firm D)
‘Yes, so I don’t actually think it is in fact most in the US but they are the largest source. And then, the largest of the freelancing sites – are countries is India but I mean down that list from there it sort of goes through I mean, a lot of the developing world, Bangladesh, Pakistan, the Philippines, but also a lot of Eastern Europe actually is quite big for us, places like Romania… And yes, and on the employers’ (clients) side, it’s basically a list of the developed world, particularly, with a particular focus on sort of the Anglosphere - Australia, Canada, the UK, but places like Germany, France are quite big for us, but I mean broadly all of the developed world, I mean we don’t see much maybe from Japan, I mean we see bits but considering their size, but yes I mean, we have users everywhere literally. ‘(CTO, Firm E).
‘Probably just about every one. Actually not sure if it’s every one, but it certainly yes, I don’t know exactly how many countries, but it would be I’d say about 100, it’s definitely more than 100.’ (CEO & Founder, Firm F).

Crowdsourcing businesses offer a new employment/payment avenue for developing country populations which are increasingly participating in Internet-enabled businesses

‘There’s also the economics of it, you know, $500 in San Francisco is different than $500 in Jakarta, right, so the amount of effort that somebody is going to put in you know, in San Francisco, versus the amount of effort that somebody will put in in Jakarta is totally different, so you have these kinds of dynamics that go on, but truthfully, the US is a hugely active country for us, but they participate in a completely different way than the people in Indonesia would or the Philippines would, because you know like somebody in the Philippines, they could make a month’s income within one contest, and I mean, some of the larger contests you could do that in the US, but still not as clear, and definitely not as much… I mean for the contest where you’re winning $2500 or whatever, $5000 even, I mean that’s great, and you could certainly, that is you know a month’s income I guess, you know, somewhere around there, depending on where you are and whatnot, so for an Indonesian when $400 can be a month’s income and $1000 – wow that’s crazy, like this is fantastic.’ (Production Mgr, Firm A).
‘Yes, we could never offer money, just for legal reasons around the globe, so if we did do any, you know, prizes it would be typically like a gift card and I think, I mean you could check up some of the websites we have there that are, that would be, that might give you a run of what we have available, yes and what I’m thinking of now is definitely like an Amazon card, that kind of thing.’ (Creative Service Research Lead, Firm B).
‘When you think of Finland, you think of Nokia, you know, and that’s what we want, we want to be you know, the same thing. It’s like Nepal - oh (Firm C) – we want it to be a win for the whole nation, this idea of innovation that comes out of the last place on earth that you would think it would come from.’ (CEO, Firm C).
‘The other area we see a lot of growth in is e-government work in developing countries, so while we’re working our workforce in developing countries, there’s a lot of developing countries that have initiatives to digitize their federal and local records, and they’re kind of just like the mobile industry where these countries are skipping over the landline phase and going right to mobile, most of these countries are going right from paper in the courthouse to
digitizing, and we have proven that we can do this on a massive scale.’ (VP, Bus Dev, Firm C).

‘And so it’s not simple economics, there’s that one cool piece of research that’s been done, where some guy put up very mundane set of tasks up and just kept lowering and lowering and lowering the price offer, to see what hourly rate of pay would get rejected by what geography in the world, and the Europeans stopped doing stuff when the rate of pay dropped down below about $4 or $5, and even the Indians stopped doing stuff when the rate of pay dropped down to the $1.20 range, but the US continued to be productive all the way down to 25 cents – 30 cents an hour.’ (CFO, Firm D).

Does (Firm D’s) CEO get paid starvation wages like the rest of its workers? (Crowd member, male, 06:20, 08/04/2012, Firm D, Firm Facebook entry).

You've got the world's population connecting very rapidly. There are five billion people almost that haven't connected to the internet. And the first thing that those five billion people will want to is get a job when they go online, because they earn $8 a day or less and in some circumstances substantially less. (CEO and Founder, Firm E, quote from an interview conducted by Australian Broadcasting Commission, 24 November 2011, Inside Business, http://mpegmedia.abc.net.au/news/insidebusiness/video/201311/INBm_Tx_2411_512k.mp4)

‘Yes, one of the big problems we have is business restrictions; we are isolated from the job markets and businesses with other countries. (Firm E) for me has been in a way a hidden door by which I can access those markets, which are the ones to use for the company I’m a part of…Yes, it is a lot of money, yes it is, like it’s like the minimal wage if we go through the official exchange rates, if the method of paying is put through the parallel market rates which I’m really not allowed to say over the phone. If you go by that I am earning in a month I earn more money than what some people earn throughout the whole year.’ (CM, Crowd, Firm E).

Crowdsourcing work is available to most people who are willing to participate. Crowds may experience difficulties and unfairness

‘Sometimes there are times when I feel like the contest is not favourable for designer, it’s very much favourable for clients. It happens, but just like (Firm A), it’s a kind of industry that can never be perfect, so whenever you are getting frustrated, with some not nice clients or not nice contests, you just have to think of that idea that this is not perfect, so accept the things that you might not be liking.’ (JP, Crowd, Firm A).

‘Another issue is regarding our pay. I am well known that the tasks we do are highly paid in US. I mean in US dollars they come in great amount and still we workers feel that we are paid lower. In past few months I have experienced a great decline in average pay per task. But on the other hand, it is great that we are getting work and we are getting paid as what we do. It’s just that I have to give more time to earn the same amount that I used earn a few months before. This is the major discouragement for workers. The price of US dollars is rising. However, our pay rate is decreasing and we cannot question about this to (Firm C) because worker contract has been signed as such’. (GD, Crowd, Firm C)

‘I am not even sure how to put it on a resume, something else I just thought of too is I haven’t declared this on my income tax either… I am afraid to look into that…. I just thought of something to tell you. I’m embarrassed to do this work, I don’t tell anybody really what I do, two people on this whole planet know that I do this work, and anyone else I sort of fudge. I run into a lot of people that I used to work with from the call centre, and they’ll say what are you doing now, and I’ll say I’m just as vague as I possibly can be. I just say I’m doing a little bit work from home, but it doesn’t really pay a lot though and I leave it at that, I just start asking them questions like crazy, and I don’t know why I’m embarrassed to admit that I do this, I think because I’m working for pennies and not for dollars. ’ (KK, Crowd, Firm D).

Just got expelled with a 50% accuracy for missing 4 questions on the now lower paying Does a Business Exist task. The only problem is all 4 answers were actually correct. It is bad enough to have a task reduced in pay then to be told you have wasted your time because your answers are flawed. Some answers were flawed by people who are getting better tasks and speeding through them with out giving the correct answers while others were non
relevant very minor differences between website addresses, etc. (Crowd member, male, 10:40, 10/03/2014, Firm D, Firm Facebook entry).

‘The early jobs that I took I took for a lower rate just to get the work, but the most frustrating thing is when somebody says that they need a job at a certain time and then you work, you kind of put off all other work to do that, and then when the time elapses you find that it’s disappeared, and you have earned no money for a week.’ (D, Crowd, Firm E).

‘There has been some major difficulties in terms of people trying to cheat. So I suppose people creating multiple accounts to give them a little bit of an edge.’ (EJL, Crowd, Firm F)

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**Theme 7: Crowdsourcing offers a competitive advantage over traditional businesses**

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<tr>
<td><strong>Crowdsourcing businesses are better, faster, cheaper and reduce risk for clients</strong></td>
<td>‘We can do it better, faster and cheaper, and I mean that, it’s better, it’s faster and it’s cheaper. Even very, very simple tasks like the image moderation work we do.’ (CFO, Firm D).</td>
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<td>‘What I have to be able to do is to deliver (clients) an answer in which I have mathematical statistical proof of that there is a 95% probability that the number I’ve given them is correct…The value-add here in the emerging science of micro-tasking of which we by far are the world leaders, is actually about the management of highly complex workflows with massively tough computational problems that sit behind the solution.’ (CFO, Firm D).</td>
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<td>‘The best anyone had managed to do was a 70% prediction accuracy and that was after four years in academia, and we were able to beat that within a week and a half of the competition going live and we ended up two months later with an algorithm that generated 77% accuracy, one tenth of an improvement, so you know, that’s a pretty spectacular result.’ (CEO &amp; Founder, Firm G).</td>
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<td>Certainly better, I mean the accuracy – we run a whole bunch of these competitions and we have never failed to out-perform the best that a company can do themselves or using a consulting firm. (CEO &amp; Founder, Firm F)</td>
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<td><strong>Crowdsourcing businesses are global and always available</strong></td>
<td>‘I mean we have a new design that is submitted to the site every five seconds, right, so it’s a huge amount of work.’ (Product Mgr, Firm A).</td>
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<td>‘So I mean in terms of employers, No.1 U.S. 50%, - No. 2 is UK 10%, - No. 3 is India 7%, then - Australia 5%, - Canada 4%, and a very long tail, and in terms of (Firm E) crowd 35% or in India and then it goes Bangladesh, Pakistan, Philippines, Romania, China, Vietnam, Ukraine, etc. All around the world.’ (CEO &amp; founder, Firm E).</td>
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<td>‘UK, Canada, Australia, as second third and fourth, they’re always kind of neck and neck, Commonwealth countries. Then you’ve got Germany, France, Spain, Italy, Mexico, Singapore, Brazil, comprising kind of the top ten, and some of these countries like Brazil is growing hand over fist for us. It’s amazing. Singapore is doing phenomenally well for us in terms of year or year growth.’ (CEO &amp; Founder, Firm G)</td>
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<td><strong>Crowdsourcing businesses operate at huge size and scale</strong></td>
<td>I don’t know exactly what the current number is, but it’s about 800,000 registered users of which about 150,000 or 200,000 do work on the average day (CFO &amp; Founder, Firm D).</td>
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<td>‘So we have about 4 million people who have done useful work for us. The reach is higher but we only count someone as being in the workforce if they do some work for us and it’s validated by our system… Our workforce is in over 80 countries.’ (CEO &amp; Founder, Firm F)</td>
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"We’ve got 7.3 million and growing, and our closest competitor has got two, so you know it’s got – with marketplaces it’s sort of like winner takes all but the employer is going to go where the most (crowd workers) are and the (crowd workers) want to go where the most employers are, right, so we’ve got more skills, a deeper marketplace, more liquid market place etc., so there’s a lot of benefits there." (CEO & Founder, Firm E).

"Over the course of all the history probably close – somewhere between five and ten million (clients). it’s on demand (so) we don’t have to take inventory on it, so we can come out with some every week and we can launch with 400 designs in the catalogue. Yes, we’re – actually we’re the largest fashion brand on Twitter, it’s like 2.5 Million followers, and then Facebook is big for us too, we’ve got about 700,000 followers on there (CEO & Founder, Firm G).

Crowdsourcing businesses can have a social benefit which also generates profit

(Firm B) harnesses the power of crowdsourcing to help great organizations and companies around the world. In addition to our work with companies on market intelligence, brand development and innovation programs, we also work with non-profits, universities, government organizations and enterprise community groups on social good initiatives. Programs have included research grant competitions, non-profit team insights and collaboration, grassroots charitable initiatives, and innovation challenges toward solving global humanitarian problems. (Company website, Firm B).

"That’s the great thing about crowdsourcing is that they get to choose as much as they want to work, so we have some people that want to work five hours a week, and some that want to work 40 hours. The average being somewhere around 15, so we definitely don’t force them or overwork them and in the area of pay, I mean in Nepal we’re able to pay extremely well and for I mean that’s even looking at like urban Kathmandu where it’s very expensive to live, I mean we’re still able to pay more than twice, you know again, what you’d get back as an entry level banker.’ (CEO & Founder, Firm C).

"So I think what throws people is when they see us lead with a statement that we want to connect a million people in the developing work with basic computer work and raise them up as leaders to impact their communities, that automatically says oh this must be not-for-profit, but it’s unfortunate because we feel that maybe business has been jaded in a way and most businesses should be about the common good and creating good for all stakeholders.’ (CEO & Founder, Firm C).

150,000 is kind of the number we have for Nepal. But the purpose for doing that is to raise those people up as leaders to address poverty in their own communities and so the way we say we define that last part we say leaders, leadership equals character times competency, it’s just a simple math formula for character times competency, and so the competency part is, so every week when our teams gather, our teams of five gather in person to have their meeting, they spend one hour on competency and one hour on character. So the competency is really basically a performance review of the last week, so the team leader has a report of everything that they did right or wrong, they go over the leader board where there is a team, where as a team we’re in – you know, we’ve moved up to fourteenth place as a team this last week.’. (CEO & Founder, Firm C)

And we never want to basically restrict the artist from going forward, so we have had a lot of companies that we’ve worked with that have said and I’m sure you’ve heard this as well, they have said, hey can we connect directly with the artist, we’re the first people to connect them, but we also want to keep in the conversation, because we don’t want these companies to abuse the artists, so we kind of stay in the conversation as if they need us to kind of make sure that they don’t get treated poorly. (CEO & Founder, Firm G).

"I mean what we’re doing is we’re creating employment in places that desperately need it, they’re in jobs that are desperately needed globally, which you know, white collar jobs and skilled jobs all working in quality jobs in whole bunch of different areas and so I mean it’s a win/win for everyone really.’ (CEO & Founder, Firm E).
## Theme 8: Crowdsourcing offers tangible benefits and exceptional value for clients

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| **Crowdsourcing businesses offer more choice to clients** | ‘Yes, sometimes they (the client) can get 80 – 100 different designers.’ (CTO, Firm A).  
“I think it just makes it very attractive, I think anybody who is you know, who has tried to work with or hire a designer, this is a very different experience, so they’re like wow, you know, I was used to struggling and maybe finding a person and getting one or two concepts, and now you’re telling me that I can get like 30, 40, 100 concepts from all sorts of different people, work with them, decide if I like them, and then you know, continue an ongoing relationship going forward, great, that sounds perfect, I would love to do that.’ (Product Mgr, Firm A).  
’(We offer) high quality results out of lots of people. Its core capability is producing everything at high quality. (CEO & Founder, Firm D). |
| **Crowdsourcing businesses enable superior service offerings** | ‘We run tests and we’re about 40% more efficient than your average data entry worker that’s just sitting in the office entering data for eight hours a day.’ (CFO, Firm C).  
“We’re really not interested in a fringe solution for like warranty card entry or something that’s a side effort to their business, we want to be right in right involved in their core value, in fact, most of our customers would say that we allow them, we enable them to deliver their core differentiator, so in terms of time, we make them faster than any of their other competitors, or we make them more accurate, or we’re able to do it at a better cost than their competitors.’ (CFO, Firm C).  
‘So if they come to us and we give them a contract, generally it’s very flexible, in that today you might have a thousand pieces of content, and tomorrow you might have ten thousand or one hundred thousand, so we can actually scale for that and it doesn’t drastically increase your cost nor does it take a big amount of time to actually make that happen, whereas it would with a traditional outsourcing firm or an internal team.’ (CTO & Founder, Firm D)  
There’s no other way to scale up and scale down a workforce as fast as (Firm D) can. (CEO & Founder, Firm D). |
| **Crowdsourcing businesses offer participatory client engagement** | ‘The fact that we have on average 350 designs coming to Firm H a day, from all parts of the world, and it’s an open call, you know you can come to (Firm G), and actually you know we’re doing a lot to increase that user experience, so we’re using, one of the things that we’re doing is we’re using technology and applications of technology such as notification, gamification, badging to continually drive relevance to the artist community right, so it makes their job easier, when they post something.’ (BDM, Firm G).  
“They’re designs that are submitted and sometimes they go through like dozens of rounds of community critique and the community is helping the designer make those designs better and finally it gets submitted and it scores well.’ (CEO & Founder, Firm G).  
“’It’s actually something that is at the heart of our company, so if we sort of get down to the nitty gritty like we believe we’re democratizing advertising market intelligent, we’re actually putting the consumer, the customer or the employee in the driver’s seat right beside the company or the Government, because they are now having a full voice’. (CEO & Founder, Firm B). |
Crowdsourcing businesses enable unprecedented scale over short-term periods

> ‘We have one client where should all of their fans and employees come on our community it will be in the millions, and that’s the client we’re working with now. Where they’re coming on you know, thousands at a time, and we’re starting to get enterprise clients that are saying I’d like to move all of my customers, all of my fans and all of my employees, because I now understand that this is you know, an enterprise innovation way of doing things.’ (CMO, Firm B).

> ‘We are the most scalable option for getting tasks done. So, for example, if you’re a company and you want to have a human being to categorize every tweet that gets mentioned about your brand, you might not know on any given day how many things are going to get mentioned about your brand. One day you might do a big launch or like some scandal might happen and you get like millions of tweets coming out. Other days they might be much lower. There’s no other way to scale up and scale down a workforce as fast as (Firm D) can.’ (CEO & Founder, Firm D).

> ‘So the fact that the client can come to us and say, hey I need this job done by tomorrow, and we can scale up to a pool of thousands of people to get that completed is something that they greatly appreciate, and they’re paying probably the same cost if they had gotten it done by a traditional outsourcing firm over say a week’s time. A ton of value is in having that flexibility.’ (CTO & founder, Firm D).

Theme 9: Crowdsourcing fosters various types of value for the crowd

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| The crowd may attain employment, income, career or personal development, a better life, esteem-building, a creative, fun or philanthropic outlet, work-life balance, 24-hour global employment availability, a time-filling avenue, an alternative employment or payment currency avenue as well as learning-, teaming-, client-building- and leadership- opportunities. | ‘The crowd is usually made up of people who like to work for themselves. Generally they are introverts. Some may have a physical disability. Some of them are moms who would prefer to work only when their children are at school. Our crowd self-select’. (CEO & Founder, Firm D).

I’ve talked to a number of our crowd members and they can tell you that you cannot categorize them simply. An example is the woman who did most work for us last year .. her entire reason for doing crowdsourcing all day every day is that so she doesn’t have to come out of her room and deal with her retired husband who is now at home every day. (CFO, Firm D).

‘Maybe I can just give my last word. I think this job is really nice for me. I am meeting new clients, I am meeting different people from around the world, and I was able to showcase my skill and I am beginning to and I think the best part is I have developed my skill more than what I can develop if I did not participate in this international competition. I mean if I did not know (Firm A) maybe my skill in logo design is just as I said around 5% but since I have been working for years for (Firm A) I think it feels to me like my ability my esteem has moved into around 90%, I think it’s something like that.’(JP, Crowd, Firm A).

‘Well actually, the main drive is money definitely because that’s what we actually work for, but except that, they have different principles on how you build up your own character, that’s for your personal benefit and that’s how you develop yourself personally as well as we actually do different community services every month, you know, so that’s something that we’ll be giving to the community, some social services like whether donating your clothes, or feeding the old people, or you know, giving some funds to the people who are victims of natural calamities, so there are different things, but these main three are the things that have been motivating us to work in (Firm D).’ (A.P., Crowd, Firm C).

No, it’s not the money. Before I joined (Firm C), I used to spend most of the time in India, I didn’t used to do anything and this made me actually… with (Firm C) they give me work to do and also work in the community which I do every two weeks… I have now worked
I just really enjoy it, it gives you such satisfactory to do, you know, especially if you come across a task that is difficult and you work your way through it, and then the next time you see it it’s a little bit easier, the next time it’s a little bit easier, and the next time it’s just like you could whip right through it, there’s a lot of satisfaction in that, they take a lot of our feedback very seriously, if you make a suggestion, they thank you for it of course, and then all of a sudden there it is. There’s your suggestion in you know, existing, for everybody else to see and that’s a real buzz.’ (K.K., Crowd, Firm D).

It’s certainly not the money (laughs), meaning that look their basic tasks don’t pay enough for it to be about the money, you know I do some other things now for them, like in terms of like reviewing tasks before they’re posted and that sort of thing, and that pays somewhat better, so that’s good, but it’s more just – it’s something to keep my brain occupied with, and to try, like to try these sorts of things, and originally too, with the sites that I am on there’s a forum or two that I am on, and part of it you know trying that is just to be part of that forum and the sort of a communication that goes on there, that we can complain about tasks together, or talk about the ones that are easier or harder or that sort of thing. (K.Y., Crowd, Firm D).

‘And certainly because money wasn’t my motivation I wasn’t really concerned about it. In fact sometimes I do competitions in areas that I don’t know because my primary aim is to learn new things and learn how to predict better. So I mean because money isn’t my motivation, I’m not too concerned. I mean one thing about (Firm G) is that you have to put a lot of time in, so I think even if money was your motivation, the per hour rate would probably be very low. So certainly it doesn’t concern me at all, not getting any money.’ (AS, Crowd, Firm F).

‘They make it easy for us, because the company pays the money to (Firm F), they kind of buy so many hours, we work so many hours and then Firm G pay us. So they’re just like a middle-man who makes it easy for us, because people like me are not into – we gladly work for free you know.’ (P.B., Crowd, Firm F)

I really found them quite interesting, they were about graphic design, they were about photography and science photography and I found that quite interesting because the videos were well produced and they were the type of shows that I would probably be watching anyway if I saw them on the Discovery Channel or on National Geographic, I would probably spend time looking at them anyway so I found that interesting that I was getting paid to actually watch and transcribe something that I would normally watch anyway (L.C., Crowd, Firm E).

it was really great pleasure to work for (Firm A), and for me it was very pleasure work as a Freelancer I had much more free time for me and for my kids because I have family, and I could work on projects I like, not every project I have to work on, so that was a few reasons why I choose to work for (Firm A) and definitely money was better than I could earn here in Serbia.(G.D., Crowd, Firm A).

‘I think they (Firm G) just hold a kind of a special place with me, because I do see them as kind of – they were the vehicle to starting something pretty special for me you know.’ (G.J., Crowd, Firm G).
Theme 10: Firm and crowd relationship is important

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<thead>
<tr>
<th>First order concepts</th>
<th>Substantiating Informant Quotations, Archival and Observation Data illuminating Second-order Themes</th>
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| It is important for the firm to establish a form of relationship and curate a level of trust with the crowd. | ‘You know, we want to take care of the designers (crowd) and to be very accessible, super authentic, you know, I have made myself available and the entire team is available, so I want them to know that they can trust in us, I want them to feel like they have somebody to go to, and literally I mean, it’s real, so they know it, they can sense it, they get frustrated, they yell at us sometimes, but they come back, oh you know, they’re like I’m so sorry I kind of lost my temper, I got emotional, or you know, whatever the case may be, the point is, is that we have a real relationship, and it’s somebody that they, it’s a relationship that they can believe in and like all relationships there’s ups and there’s downs but at the end of the day they know that it’s there and it’s solid and they can feel it, we can feel it and it’s something that I think we’re definitely very proud of.’ (Product Mgr, Firm A).  
‘We get thousands and thousands of contributions from them because once you – you actually meet, something that someone is passionate about and you give them the opportunity to come into one of these communities, where it’s a real authentic exchange. You know I participated in communities like this where I feel I get a lot out of it and I haven’t got a single penny from them.’ (CEO and Founder, Firm B)  
‘we feel like regardless of the country and what needs there are there, we always seem to find a large group of hungry well-educated individuals that need work, and we find they do great work, you know, we couldn’t, we’re not – we’re actually really what should I say - blessed by them, we feel fortunate to have these people’ (VP, business Development, Firm C).  
‘Well we’re trying to build a community here so it’s – for a small company it’s hard, but the culture here is right on that sort of thing, that we think of this as a global venture and there’s a lot of people around the world that we need to work with, so we had better know who they are and touch them, you know.’ (CFO, Firm D).  
‘Like you know, we always said and it was completely the truth, that we basically treated everyone in the community (crowd) like you know – obviously we didn’t know everyone - we treated the community in general like no different than we would treat each other or our friends, and that really was what it came down to, like if we knew that we could make like a whole bunch of money in a very short period of time but we felt like it would put stress on the community, it would ‘no’ instantly, but there would be no question about it, because it wasn’t really, I mean by year 4 when money really started to come in and we were like holy crap we have a business,’ (CCO, Firm G).  
Yes, I mean I’ve been one of the oldest workers so it does feel special from where they stand and where they are today, I’ve been able to see all the changes and you know whenever I got to the office I feel like really special because they treat me like ok she’s here you know, they have that feeling like she’s the oldest one and she’s here and then you know, there’s that interaction that just develops between people that have been working in (Firm C) and the ones who are working from back home, so yes, I mean, you know, the whole thing is special for me.’ (A.P., Crowd, Firm, C).  
Yes, a lot of the contact I have with (Firm D) is through their forums when I’m posting about issues, and I find overall they are so easy to deal with, they’re very accommodating as to you know, the issues that I post and things like that, so I do have a lot of confidence in them, and I also think this company is going through a lot of growing pains right now with changing over their system and things like that and running into the few issues etc., but I think that they’re going to be big like Facebook and Google, I honestly believe in that, I think that this is the new way to work (K.K., Crowd, Firm D).  
‘I like the idea of keeping in touch with (Firm G) and I like to just sort of keep up to date with what they are doing, not that I’m as in deep into it as I was, but just because out of respect of what they do, I think they kind of set the standard and they’re always changing things up, and I think they have to do that in order to stay kind of level ahead of everyone else, you know, so I mean I’m just a (Firm G) fan, and I talk it up because I’m just a fan of what they do and I’m a fan of like what (Firm G founder) created.’ (G.J., crowd, Firm G). |
7.5 Emergent Themes

7.5.1 Theme 1: Crowdsourcing-born firms form from pre-existing, organically-formed crowd communities.
(Links to RQ 1 – essential features and practices)

The first theme sprang from the fact that all firms which were theoretically selected were those which proclaimed to be crowdsourcing firms, were ‘born’ crowdsourcing and had always curated and utilised crowds as a mainstay of the business operation. However, it became apparent in the study that crowdsourcing crowds play a strong role, even a primary role, in how a crowdsourcing-centric business forms and how it progresses.

Interestingly, two of the firms (A and G) indicated that their crowd led the way and they had grown in a free-range, organic manner. There was a sense that the firm had followed behind the crowd, consulted it and formalised relationships later. One of these firms (firm G) mentioned that the crowd was a ‘delicate’ entity and had to be treated well and with care. Another of the firms (Firm A) even indicated incredibly that they initially tried to kill off the crowd-led activity which eventually formed the basis of their current crowdsourcing business. So this firm in fact formalised and operationalized a business around an activity which was started organically by the crowd. In addition, one firm (Firm B) indicated that its business had sprung from a pre-existing crowd community. Yet another firm (Firm E) claimed that its crowd would independently create new categories of different types of work. This meant the company was required to frequently update its ‘work categories’ tables and ‘skills available’ categories. For example, the firm did not offer crowdsourced architectural jobs but found the crowd independently offered these services to clients - so the firm then following the crowd’s lead and added ‘architectural services’ as a new work category on their public website.

All of the firms appeared to have crowds before they had clients. In addition, most firms indicated that crowds were in over-supply in relation to the amount of work available. Related to this, some firms (particularly A, D, E) were mindful of the fact that multiple millions of people in the developing world were only just connecting to the Internet or in the process of doing so. The CEO of Firm E expressed the view that a percentage of this potential new labour supply would be seeking forms of employment,
including crowdsourcing work. The situation of crowd-worker overload and work
under-supply would only become starker given this scenario. One informant, the CFO
from Firm D commented that:

> You know, and the reason that that maths is so shockingly dysfunctional is that
the total capacity of the human brain multiplied by 24 hours in a day, seven
days a week, by the population of the world, so far exceeds the demands placed
on it by the supply of this kind of work to be done, that the price has to
approach zero and so the crowd is actually not adding value in the way that
you might traditionally think about it.

Such a situation predicts crowdsourcing worker supply far outstripping demand for
work and crowdsourcing payments being further eroded. Crystallising this issue, two
crowdsourcing workers from Firm D stated:

> So the fact that this work already exists and you just pick it up and do it, and
try to beat someone else, because we’re just like piranhas when a new job is
posted, everybody dives on it and it’s gobbled up really quick and you know
there are some days there are no jobs at all, I’ve actually seen that when there
is absolutely nothing. (KK, Crowd, Firm D)

> Yes once in a while they’ll post something on getsat and say how wonderful we
as contributors are, and that they wouldn’t have their jobs without us, but I
sometimes, it sometimes feels like they – it’s more just like they know that if I
quit doing it, there’s another thousand people out there that they would go get
instead. (KY, Crowd, Firm D)

Surprisingly, however, many of the companies executives (and confirmed by some
crowd members) mentioned caring for and curating their crowd in various ways, despite
being aware of their firm’s very large crowd sizes and burgeoning crowdsourcing
workforce.

In relation to appreciating its crowd, the ‘polar’ case used in the study, Firm P which
is not a crowdsourcing firm but used crowdsourcing in a major project, even mentioned
creating as a prize, “a massive bronze statue of one of the people that participated”
(Creative Director, Firm P). This was a single symbolic sign of appreciation toward the
multiple thousands of crowd participants used by Firm P in its marketing campaign
project.
7.5.2 Theme 2: Crowdsourcing owners are pioneers and trailblazers
(Links to RQ 1 – essential features and practices)

Some firms (A, D and G) appeared to be proud of the fact that they were using a phenomenon in their business, that is, crowdsourcing, which is still a developing phenomenon and had ‘edgy’ undertones. One informant who was the founder of Firm G amusedly remarked that he still could not explain to his own mother what his firm did because it was such a new phenomenon.

Many of the company founders expressed that they were pioneers of crowdsourcing. Interestingly the phenomenon of crowdsourcing is considered so new that one of the firms (Firm D) indicated that they were ‘underground’ selling to an ‘exclusive’ set of clients. Two of the firms (Firms B and G) indicated that the phenomenon of crowdsourcing was so new that they were using crowdsourcing prior to actually knowing what it was. One firm (Firm B) indicated that Jeff Howe - who has been attributed with coining the term ‘crowdsourcing’ - contacted them to tell them that they were, in fact, a ‘crowdsourcing’ firm. The firm indicated that at the time they were glad to be able to put an official name to what they had already operationalized as a core activity in their business.

The locales of at least four of the businesses (A, D, E and F) were in ‘creative’ districts of their respective cities. Of the three firms at which I conducted site visits and observations (A, D and F), each were in hard-to-locate, unsigned parts of buildings and cultivated a highly casual work environment with one locale having large numbers of bikes slung against the wall and a large Billiards table in the middle of the work space. There were also no obvious artefacts of firm position hierarchy, such as closed-off office rooms for executives.

One firm (Firm C) claimed to have created a unique hybrid crowdsourcing/outsourcing model. The hallmarks of this model are that the firm recruits from a selected crowd of either tertiary students enrolled in prestigious courses or through the social network of existing employees. This firm also provides a tight management structure for its crowds and features ongoing improvement and ethical training. This firm claims that even though other crowdsourcing models have flexibility in that vast scaling of crowd numbers can operate efficiently, such models lack accountability in
that the crowd are random and that crowd training, correction and ongoing improvement is lacking in crowds of such crowdsourcing businesses.

None of the firms called themselves a monopoly but one firm (Firm B) mentioned it was the only firm which offered an integrative solution and only had competitors in individual components of its business. At least four firms (A, B, E and F) recognised they had first mover advantage and that other rivals would struggle to currently compete on an equal footing. Some (particularly A, F and G) were aware of copycat rivals but were generally unconcerned and somewhat dismissive of such rivals. One firm (Firm F) provided insight to the fact that it was still unclear to him how and why crowds form and stay and that if rival firms to his offered as much or more payment or reward for crowdsourcing work it was unclear whether such crowds would remain with his firm.

The Creative Director from Firm P, the ‘polar’ case, confirmed that the idea of using crowdsourcing was a pioneering step, and while risky was also very rewarding. His view was that: “we try and do things differently all the time, so we’re pretty used to the high risk and high reward mentality”.

7.5.3 Theme 3: Crowdsourcing businesses are innovative and self-perceive as disruptive to other businesses
(Links to RQ 1 essential features and practices and to RQ 2 value creation)

Crowdsourcing firms generally saw themselves variously as disruptors of whole industries, of country work and recruitment practices, of market segments, of enterprise democracy, of university learning potentials and of Internet retail practices. One firm (Firm A) saw itself as opening a new area of a market which previously did not exist.

Part of this stated landscape of ‘disruption’ also included the notion that crowdsourcing is an order more efficient than traditional outsourcing. Crowdsourcing is a phenomenon that disrupts traditional outsourcing. Crowdsourcing, as it is practiced in most crowdsourcing firms in the study, offers clients the advantage of paying only for output with little or no slack resources, unproductive downtime or on-costs. Hiring and recruitment costs are nullified. For example, the Vice President of Business Development of Firm C states:
What I look at is the total cost reduction - so you need to compare apples to apples - meaning traditionally when you do, when you do traditional BPO you’re usually hiring those people in another location and you’re paying them hourly not necessarily for their performance. So when you move to crowdsourcing you’re only paying for what you see, you’re paying for the output, and typically something that took two hours with traditional BPO, we can bring that down to potentially forty minutes, thirty minutes, just because of our parallel processing.

The economies of scale of large crowds also work to reduce costs. In addition the scaling and flexibility that crowdsourcing allows can be of great benefit to clients as is illustrated by the remarks of the CTO and founder of Firm D:

So the fact that the client can come to us and say, hey I need this job done by tomorrow, and we can scale up to a pool of thousands of people to get that completed is something that they greatly appreciate, and they’re paying probably the same cost if they had gotten it done by a traditional outsourcing firm over say a week’s time. A ton of value is in having that flexibility. Also not knowing your volume, so if they come to us and we give them a contract, generally it’s very flexible, in that today you might have a thousand pieces of content, and tomorrow you might have ten thousand or one hundred thousand, so we can actually scale for that and it doesn’t drastically increase your cost nor does it take a big amount of time to actually make that happen, whereas it would with a traditional outsourcing firm or an internal team.

Another form of disruption stated by the some of the study informants, in the manner above, is that all of the seven crowdsourcing-centric firms studied used crowds from developing countries – albeit most firms also did combine developing country crowds with crowds from developed countries. The crowds from developing countries were enabled to work remotely for clients from developed countries and at times form lasting client bases with ongoing relationships. As expressed by the founder of one crowdsourcing firm, developing country crowd members could benefit from ‘jobs that are desperately needed globally’ (Founder and CEO, Firm E). This type of change is brought about by large numbers of developing country crowd participants commencing online activity and being active online and through the relatively recent availability of high speed Internet networks, ubiquitous Internet communication availability and widespread Internet service provision (Wexler, 2011).

In terms of innovation, Firm G has won a major national industry innovation award in the United States and Firm A has won a major national award in Australia. Most of the firms mentioned that they were innovative and oftentimes the first ‘player’ in their
field in the world. One informant from Firm F made it clear that because
crowdsourcing was so new it was easy to establish crowdsourcing companies in
particular stratum of industries. This meant that he believed that there was not an
oversupply of direct competitors in the same space because of the multitude of spaces
still available. The Business Development Manager of Firm G posits:

There’s a lot of competitors in the space - it’s just that there’s so much
opportunity to differentiate yourself that I think that other companies that come
into this space have said well why do I want to compete in this space with
(Firm G) when there’s actually a space over here that’s not being played in
and we can actually be a leader in this space, I think it’s more of a case of that,
because there’s so much room and the crowdsourcing model is not completely
saturated that if you really did analyse it that there’s enough room for all the
players, I think that’s what the case is.

One firm (Firm E) mentioned that it was not obvious when he founded the firm that
an entrepreneur could make a crowdsourcing firm a success in a for-profit environment.
Four firms (Firms C, D, E and F) had developed highly innovative technological
systems in order to control crowd inputs and outputs and in some instances to
continuously test quality. One firm (Firm G) had innovatively cultivated three separate
crowds including one labour supply crowd, one production assistance crowd and one
demand-side crowd of consumers. All firms had innovated around managing very large
crowds.

The crowds themselves were also contributors of innovative solutions. One firm
(Firm F) has cultivated a crowd of highly competent, well-educated data science
specialists who compete against each other to provide highly innovative solutions to
extremely difficult data problems posed by industry or government. Each data
competition is managed by an automated online leader board which provides instant
feedback on solutions entered by competitors and re-positions competitors continuously
in real-time based on the quality of their entries. The leader board allows each
competitor to see in real-time how their data models compare to others and ‘drives
better and better results’ (Australian Broadcasting Commission, 2011). Such innovation
by the crowd cultivated by this crowdsourcing firm has, for example, solved a decades-
old data problem. The National American Space Agency (NASA) had been unable to
previously solve this problem over decades with its own scientists and researchers until
it used crowdsourcing via Firm F (Australian Broadcasting Commission, 2011).
One ‘polar’ case (Firm P) informant believed it was also highly innovative, unique and edgy to use crowdsourcing. The firm’s Creative Director, Global Marketing and Export Sales Manager said of the firm that it considered itself: “Innovative, entrepreneurial, willing to try new things, and I guess one thing that (the Firm’s owner) always says is the industry is going one way, I’ll go the other.”

7.5.4 Theme 4: Crowdsourcing incorporates efficient transactional processing of large numbers of people and jobs and/or projects
(Links to RQ 1 essential features and practices and to RQ 2 value creation)

To state the obvious, crowdsourcing firms require a crowd and usually a large one at that. Crowdsourcing firms are naturally required to be able to manage, control and direct extremely large crowds. The firms theoretically selected have cultivated crowds sizing in the range from 100,000 to 7.3 million. Four of the seven firms (Firms A, D, E and G) selected for the study have crowd which are sized in excess of one million. One firm (Firm D) claims to complete the equivalent of more than four person years of work per day using its huge crowd. Another firm (Firm A) claims to receive an individual crowd member’s production output averaging every five seconds around the clock all year round and has 1,500 crowdsourcing projects open at any given time. Yet another firm (Firm E) has managed 175,000 projects and paid its crowd $45 million over the past five years since it established. This has been with an on-site staff of 75 or less full-time equivalent. In addition, Firm E’s founder and CEO claimed that a client requesting work would receive crowdsourcing bids from the crowd within 10 seconds of posting the work requirement. At least two firms (C and D) indicated that scale is their greatest competitive advantage over any rivals, particularly traditional firms.

Each crowdsourcing firm in the study has been able to efficiently manage its huge crowd numbers with very modest levels of traditionally paid firm staff. The ratios of traditionally paid staff to crowd are represented in Table 7.2 below.
Table 7.2 helps to illustrate the efficiency of each of the firms in terms of how many staff they employ in relation to crowd members they attract. The least efficient of the firms in the study have one staff member for every 3,000 crowd members and the most efficient has one staff member for every 100,000 crowd members they attract. Firm D which has the most efficient ratio manages its huge (five million), anonymous, always-on crowd very efficiently via quality-guaranteeing algorithms. The CTO and founder of Firm D mentions:

*So anyone can come and do the majority of the tasks on our platform, some tasks will be pre-qualified to say only this small component of the crowd can do the task, in which case they won’t even see that as an opportunity to contribute to. That being said it’s still the majority of our tasks are open to the world and the system is set up in such a way that if you come in and you do are doing a bad job according to our standards, you will be prevented from doing further work on that individual type of job yet you will be able to do other (Firm D) tasks.*

Such technology allows for many millions of people being able to work concurrently with control, gatekeeping and quality output elements being regulated automatically through ubiquitous technological oversight. This allows for a relatively modest workforce of 50 staff (1:100,000 staff to crowd ratio) employed directly by Firm D.

The Firm P Creative Director, confirmed that the crowdsourcing project had yielded more than 100,000 data points for the firm, which provided unique and valuable insights into the habits of their crowd clients, which could relate directly to ‘intelligent’ product

### Table 7.2

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<th>Firm</th>
<th>Staff</th>
<th>Crowd</th>
<th>Ratio of Staff to Crowd</th>
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<tbody>
<tr>
<td>A</td>
<td>75 FTE</td>
<td>228,000</td>
<td>1:3,040</td>
</tr>
<tr>
<td>B</td>
<td>30 FTE</td>
<td>200,000</td>
<td>1:6,667</td>
</tr>
<tr>
<td>C</td>
<td>50 FTE</td>
<td>150,000</td>
<td>1:3,000</td>
</tr>
<tr>
<td>D</td>
<td>50 FTE</td>
<td>5,000,000</td>
<td>1:100,000</td>
</tr>
<tr>
<td>E</td>
<td>300 FTE</td>
<td>7,300,000</td>
<td>1:24,333</td>
</tr>
<tr>
<td>F</td>
<td>20 FTE</td>
<td>100,000</td>
<td>1:5,000</td>
</tr>
<tr>
<td>G</td>
<td>106 FTE</td>
<td>2,500,000</td>
<td>1:23,585</td>
</tr>
</tbody>
</table>
development/creation and later into well-researched sales channels.

7.5.5 Theme 5: The crowdsourcing business, its clients and its crowd are all essential elements to successful operation
(Links to RQ 1 practices and essential features and to RQ 2 value creation)

Crowdsourcing as it operates in the crowdsourcing firms appears to be not just a single company routine or a simple business activity. It appears to operate as a system which closely involves three main stakeholders including firm, crowd and client/consumer. A good example is Firm G. In this firm, there is a submission-crowd which competes against each other and submits content for consideration of a second crowd. The second crowd is a decision-making crowd which chooses the best of the approximately 300 competing weekly content entries of the submission crowd. The decision-making crowd culls the 300 entries down to approximately the 10 best (in its opinion) each week. The firm checks over the final 10 entries and makes a final decision. In most cases the firm will entrust the decision-making crowd and also choose the same final 10 content entries. The firm will send out the winning content entries for mass-production. Once the items are mass-produced, using each of the 10 winning crowd member’s respective content, the firm will use its third crowd, a crowd of potential consumers. This final crowd of consumers will be informed that the production items have been produced *en masse* and are now for sale. This final crowd of consumers may include, but is not limited to, both the submission-crowd and the decision-making-crowd. This consumer-crowd will then typically buy out all the production items.

Every single line of production items have always sold out in Firm D’s 13 year history. Firm D does not pay any of the crowds with the exception of the 10 weekly winning content entrants, who are paid a modest sum for their winning submission and share in ongoing royalties. Firm D completely relies on its submission-crowd for content, mostly relies on its decision-making crowd to cull incoming content entries and choose the best quality entries and almost wholly relies on its consumer crowd for incoming revenues (they have recently opened a bricks-and-mortar shop which does bring in some revenues in addition to the online revenues).

All of the stakeholders in this crowdsourcing firm are critical to its ongoing existence.
as a firm. Both upstream elements such as the external submission crowd and
downstream elements such as the external consumer crowd are systemically linked and
crucial to the operations of the firm. Firm D is noteworthy in that it brings its decision-
making crowd – an external entity - inside the firm to play a critical role in production
decision-making. Such an important role rarely resides outside the firm boundary –
much less in the hands of an unpaid (even, let it be said, ‘anonymous’) crowd. So, while
the firm’s managers still have absolute final say over final production content, the main
role of what to produce is certainly shared with the decision-making crowd, which is
clearly external to firm boundaries. In addition, not only is this ‘decision-making’
crowd external to the firm boundary, the crowd is characterised by its anonymity,
ephemerality and randomness. Literally anyone can take part in the decision-making
process crowd of Firm D.

In a similar vein, whereby all stakeholders are critical, Firm A product manager
posited the following view:

*So because of the two sided marketplace and the money that is primarily
coming from the client side, it’s very easy for the company to fall into a trap of
just solving customer problems, oh well if we solve these problems we could
drive more business and we’ll make more money for the business and all of this
sort of stuff and that is fine, you have to do that too, but the reality is without
the designer community (crowd) there isn’t a business either, so even though
they are not directly paying us money, the business doesn’t exist without them.*

Firm A, similar to the example of Firm D, has a system whereby both the external
elements of crowd and client are tightly woven in their operational process. Firm A
relies on clients to self-serve to a large extent and specify the parameters of the work
they require online which is sent out to the large competing crowd members *en masse* to
complete. The crowd note the client’s work parameters and compete against each other
in large numbers to produce and complete finished items for the client’s consideration.
The client receives the crowd’s completed individual output *en masse* (more than 100
items could be received) and culls the bulk of the crowd’s production to choose the best
entry/ies and pays the firm for it/them, with the firm then going on to pay the successful
crowd member(s). It is clear that for crowdsourcing Firm A, the crowd which produces
the bulk of the company production workload is critical to its existence - as is the client,
which specifies the work required and culls and chooses the best entries. The client
plays a role both upstream and downstream in the operations process. Both external elements of client and crowd play non-trivial roles in the operations process of Firm A.

Firm E also has a very similar operational process to Firm A where all stakeholders are involved in upstream and downstream systemic operational elements and are again critical to the firm’s existence. The CEO of Firm E, aware of the importance of all three main stakeholders to the success of his firm states: “It’s all about the people right, if there weren’t good freelancers (crowd), then the whole thing wouldn’t work, right, if there weren’t good employers (clients) the whole thing wouldn’t work, and if there weren’t good (firm) staff the whole thing wouldn’t work.”

Firm P, whilst not a crowdsourcing-centric firm, used crowdsourcing for a major product creation and development and later sales channel. The crowd were intrinsic to the product development which was developed directly from the results of the 100,000 points of data collected from the crowd. The crowd later functioned to buy and further refine and develop the product. Sales from crowd members were also generated once the product was developed. So the crowd was highly systemic in tandem with the firm in creating the product, and then, critical later in the cycle to purchasing it.

7.5.6 Theme 6: Crowdsourcing is available at all times to people willing to participate (Links to RQ 1 essential features and practices)

One of the hallmarks of crowdsourcing is that it is available at all times to the crowd, which are overwhelmingly global. Most of the crowdsourcing firms had crowd members in almost every country in the world. The crowd contributors are characterised by their willingness to participate at any given time in any given world time zone. Of the 21 crowd members interviewed, some of them worked part-time, casually, at down-times during their working day in their full-time job or after work, seasonally or full-time up to 16 hours per day. One crowd member (KK, crowd member, Firm D) admitted to working as much as possible every day of the week from the moment she woke up in the morning right through until as late as she could bear at which point she would fall into bed at night.

The crowdsourcing firms in the study were all characterised by their continuous availability across all world time zones and ability to accept continual and sustained
transactions. Firm A admitted to receiving crowd production items every five seconds around the clock from all global time zones. Firm D’s CEO and founder admitted that combined daily crowdsourcing output from the up-to-five-million-strong crowd would produce ‘several years of work per day’. One of Firm D’s crowd members (BA, crowd member, Firm D) confirmed to liking the fact that the work is always available. She stated: ‘Yes. I’ll stay here as long as they want me, so you know, there’s always work to do. Yes…(It’s) the availability of it, and of course the ability to make money, you know.’

Another hallmark of the crowdsourcing firms participating in the study was that each firm honoured the crowdsourcing tradition of offering crowd transactions to any participant willing to participate, with Firm D being the most prominent example, whereby literally anyone with access to a computer with Internet capability is able to participate. Firm D’s CEO nominates this form of crowdsourcing as the ultimate meritocracy.

While Firm C took some steps to limiting its crowd to those in Nepal, students in prestigious university courses and further crowd members known to existing ones, all other firms were set up to allow anyone to participate who was willing. Whilst it could be said that the work required of some of the firms restricts the crowd population, most notably Firm F which posts competitions requiring crowd members to participate who have strong capabilities in predictive algorithm analysis, such firms do not formally place restrictions such as pre-qualification or minimum education standards. In fact, Firm F had one competition winner of a major complex data science competition who had no tertiary education training and was a small business owner in a remote township in the USA. Firms A, E and F post crowd work requiring skill levels but these are skills which any person may cultivate, such as drawing pictures, and all these three firms certainly also attract hobbyists and self-taught crowd members.

It should also be noted that crowdsourcing has become a phenomenon which is increasingly popular with crowd members in developing countries. The developing country crowd’s willingness to participate is assisted by the fact that many can increase their earning capacity through access to first world clients remotely fostered by crowdsourcing. Seven crowd informants and five firm informants mentioned that
earning capacity of crowd members in developing countries is improved through payments derived through crowdsourcing work. One crowd informant (CM, crowd member, Firm E) also mentioned that international payment mechanisms could be set up in a manner which helped overcome localised currency and business restrictions in his home country. Another crowd informant (KK, crowd member, firm D) mentioned not being taxed as an advantage. Another crowd informant (JR, crowd member, Firm D) mentioned the advantage of virtual currency via gift cards such as Amazon or Wal-Mart Stores as a highly desirous proxy payment method used by the firm.

Crowdsourcing, while available to those willing to participate, is not without issues arising from difficulties posed for crowd members. One of the chief difficulties is the power imbalance that crowd participants may suffer. Five of the seven crowdsourcing firms (firms A, D, E, F and G) are set up so that crowd members are required to compete against each other. A sixth company does not regularly, or in all situations, pay its crowd members relying instead on philanthropy, volunteerism and issue-passionate crowd members, time-fillers or hobbyists. In addition, all of the five firms running competitions require crowd members to submit completed work as part of the competition. In this scenario no crowd member is paid where his/her work output supplied is not the winning submission. This translates to the situation where for each and every crowdsourcing competition run by these five firms there potentially may be scores, hundreds or even thousands of wasted person hours of work for which the individual unsuccessful crowd member(s) receive no payment. Typical of the response of the crowd to this situation is JP, a crowd member of Firm A:

_Sometimes there are times when I feel like the contest is not favourable for designer (crowd), it’s very much favourable for clients. It happens, but just like (Firm A), it’s a kind of industry that can never be perfect, so whenever you are getting frustrated, with some not nice clients or not nice contests, you just have to think of that idea that this is not perfect, so accept the things that you might not be liking._

Crowd members in this type of scenario appear resigned to the fact that the power imbalance exists and generally try to make the best of the situation.

The firms expressed a number of views concerning the potential exploitation of crowd workers given the above scenario. The first ran the line that it was only
‘outsiders’ who brought up these issues not the firm’s own crowd:

like on the designers’ side (the crowd), as far as feeling exploited, well that more or less comes up mostly from designers on the outside, you know, it’s like – a lot of times the complaints that we hear from like the graphic design industry at large it’s just designers who aren’t participating in the site, maybe they are established freelancers who have already built their businesses and they have a great client base, they don’t really need us as much, and they are probably in first world countries as well, where there’s more clients around and things like that, and you know, they can kind of sit the sidelines and pooh pooh the whole thing as a bad idea, but they’re not really faced with the challenges that we solve, you know, and the designers that we do serve who are faced with those challenges jump to our defence, they’ll be the first to jump in, it would be like, you don’t know what you’re talking about, I built this like international business using (Firm A), or I live in Europe and I spend the winters in Thailand you know working on (Firm A) because that’s what it allows me to do, you know, I can do this work from anywhere.

(Product Manager, Firm A).

Another firm ran the line that the crowd benefitted from other intrinsic and extrinsic benefits than just payment and money:

They were members of the crowd, they said the same thing that you bring up ‘Oh it’s Dickensian, and you’re making people work for no money’. You know we’re very different than 99 Dollar Logos, like it’s a really different, reciprocal engagement, where people get a lot out of intrinsically and extrinsically participating in our (crowd) community, if they really feel you know, like say people who vote on Flickr by adding all of my contents on the Flickr website and by participating I feel like I get a lot of value, but am I actually going to pay for the privilege to do it right, but I feel like I’ve got a lot out of it.

(CEO, Firm B)

Some crowd members had a similar view to the above sentiments. For example, all four crowd informants of Firm F mentioned learning opportunities and the opportunity to compete against peers as more important than money.

Firm P at times ‘paid’ some members of its crowd with limited quantities of the new product the crowd helped to develop. One crowd member had a bronze statue of himself presented as a symbol of the firm’s appreciation to all crowd participants.
7.5.7 Theme 7: Crowdsourcing offers a competitive advantage over traditional businesses
(Links to RQ 2 value creation)

Firm informants provided details on a number of elements which contributed to where crowdsourcing firms may have a competitive advantage over traditional business rivals. Among the elements mentioned were the size, speed, global reach and scale of the crowds used by crowdsourcing firms. Traditional business, prior to the advent of modern Web 2.0 crowdsourcing, would have found it cost prohibitive to scale up to 10,000 people working on a task for two hours. This type of working arrangement is now made possible by crowdsourcing. For example the founder and CTO of firm D spoke of the advantage over traditional firms via the flexibility afforded by the power to scale a very large (up to 100,000) crowd of crowd workers up or down very rapidly (within a 24 hour period) without drastically increasing costs. Two firm informants in Firm A spoke of the advantage over traditional firms of their firm’s crowdsourcing system. This system comprised scores or hundreds of crowd workers presenting completed work to the client within a traditionally very short turn-around period. In this situation the client had an advantageous large choice within a truncated timeline over traditional industry work practices.

The global reach of crowdsourcing firms, with all companies except Firms C and P, having crowds in more than 50 countries, was seen as a major competitive advantage over rival businesses. While many businesses may have access to a globalised workforce, crowdsourcing firms have a truly international crowd-based workforce working in a continuous manner at all times over a 24 hour clock and every day of the week. These firms reap the benefits of being primarily a meritocracy – a fact mentioned by three firms.

In some cases the language barrier is not a difficulty because of the nature of the business. Firm A CTO states: “I guess you know, the beauty of the field that we’re in, graphic design, is that images and designs transcends all languages, so when a designer comes up with a concept and presents it to a client - the client can look at that, and without having to read any other words knows whether the design is on brief or not”. The client bases of the majority of crowdsourcing firms are based in developing
countries but are also largely international and in more than 10 countries. Only one firm reported only having American and Canadian clients.

First mover advantage was another element that firms mentioned as being an advantage over traditional business rival offerings. Six of the seven firms (Firms A, B, C, E, F and G) mentioned the advantage of being the first crowdsourcing firm in their industry/space. Typical of the response was the CEO from Firm A:

*I think that’s been our number one advantage, it’s being number one, and we were kind of for the lack of a better word I guess, born globally, we were a global company from day one ...it’s been global from day one, so I think yes, I’m happy to say we’ve got a critical mass now, we’ve got the most designers (crowd), the most customers and so it’s very hard to – so I’m not saying – you’ve got to be very careful what you say when you say it’s impossible to lose that position, it’s definitely possible, we need to keep on our toes, but it’s a huge advantage.*

Echoing this viewpoint is the CEO from Firm F: “There’s a copy-cat out of India called *(name deleted)* that’s popped up about a year ago. But I think it’s hard for them to get a lot of traction because we have a big first mover advantage.” Also similarly the CEO from Firm E posits:

*It’s really hard at this point because you know, to get – kind of have any scale in this industry now you have to have a million users, that would take you a lot of time, by the time that a new entrant gets that, we’ll be well down the track...I don’t know about a billion, but you know we’d be up to 10 million right. So these marketplaces are tricky you know timing is everything, it’s all about scale and it would be very challenging for a new entrant coming in now and actually get growth. I mean you would need like four digit growth which is still unheard of.*

The entrepreneurial spirit of the founders and the timing of their start of their business of the firms was also a stated factor in terms of competitive advantage over traditional rival businesses. The CEO of Firm E offers:

*If I was six months later I am sure the business wouldn’t be where it is today, and if I was six month earlier it would be likewise, if you’re too early to market sometimes you’ve got to oil the ocean to kind of get consumer behaviour to change, because let me tell you, when I started this business it was not obvious that you could go and get someone from the other side of the world to build a website for you for a few hundred dollars, right? You’d say: “You can get Bill from Bangladesh, - “where is that, do they speak English, do they have computers, would I have to spend more time correcting them or instructing
them, it would be too much trouble alright”, and now people are saying, “this is the smart way of doing things”, but four years ago it was not obvious.

In a similar vein the CEO from Firm A states:

*When we launched there were competitors that launched you know, literally within months after us, but they launched with you know, no crowd and no customers, if that makes sense, and we launched with both designers (crowd) and customers, and so kind of we were profitable from day one and we had this really good base foundation of users to build on, so - and we’ve remained number one since that day.*

The final chief factor in terms of competitive advantage over rival businesses is that employment on-costs are greatly reduced given the crowd work remotely, supply their own hardware and Internet connection and are generally not included in firm-based administrative overhead costs such as staff training sessions or staff medical schemes. It should be noted, however, that Firm C was an exception and did offer dedicated training sessions for the crowd. In addition, generic-style, ubiquitous work ‘contracts’ cover crowdsourcing members further reducing agency costs like individual contract negotiation outlays. The crowd are generally only paid for useable and/or winning output so that clients pay only for realised results. There is no payment for any crowd unproductive down-time from the perspective of the firm or the client. Typical of this notion is the following quotation from the Chief Financial Officer of Firm C: ‘We run tests and we’re about 40% more efficient than your average data entry worker that’s just sitting in the office entering data for eight hours a day.’

A final competitive advantage is that some of the crowdsourcing firms (particularly Firms B and C) saw themselves as promoting a social benefit whilst at the same time generating profit. A number of the firms’ informants saw this as an advantage in terms of standing as a global corporate citizen. The Vice President of Business Development for Firm C states:

*I think what throws people is when they see us lead with a statement that we want to connect a million people in the developing work with basic computer work and raise them up as leaders to impact their communities, that automatically says oh this must be not-for-profit, but it’s unfortunate because we feel that maybe business has been jaded in a way and most businesses should be about the common good and creating good for all stakeholders*
Four of the firms (A, B, C and G) identified social initiatives involving their crowd including ethical training, philanthropic projects, career development initiatives, developing country initiatives and individual crowd member showcasing and public relations. Firm B identified as having a social benefit through their work in the democratisation of corporations wherein those usually vested with less voice and power, such as staff, were included in internal firm crowdsourcing to improve industrial relations, reduce power distance and promote meritorious participation in strategic decision-making. All of the firms saw some social benefit in providing the opportunity to compete for paid work for global crowds, particularly those crowds in developing countries with fewer local opportunities. In relation to this Firm A’s Production Manager posited:

*I think that we’ve done a very good job of curating and taking care of the community (crowd) so they’re actually, you know, while many of them can work, like I said they are going to find work in lots of different places, we do end up being a primary resource for where they are spending their time, a primary resource for work.*

Firm P’s Global Marketing and Export Sales Manager believes crowdsourcing offered the firm a competitive advantage over its rivals in terms of cost outlay. She states: “..from a production perspective it (crowdsourcing) was probably slightly more expensive but it would have accounted that it was much cheaper, because an above-the-line campaign could cost anywhere from $2 million - $5 million whereas this would have cost an eighth of that.”

7.5.8 Theme 8: Crowdsourcing offers tangible benefits and exceptional value for clients
(Links to RQ2 value creation)

There are tangible benefits of crowdsourcing for clients. These include the efficient funnelling to clients of scores or even hundreds of individual crowd members’ efforts and the level of choice such funnelling amounts to. Other benefits include the global crowd workforce, the lower costs, the tailored productive output, the mediated relationship, the ongoing direct relationship with crowd members, the meritorious nature of the contested result, the fast and efficient crowd output and the task-centric focus and the scalability afforded by huge available crowd workforces.
Firm A’s Production Manager sees the offering for the client as ‘compelling’ and states:

> it’s just a compelling offering, and people want to get involved on the client side, people want to get on the designer (crowd) side, therefore, we’re able to sell concepts, we’re able to attract designers (crowd), we’re able to make designers (crowd members) money, we’re able to make money ourselves, we’re able to get clients you know, what they’re looking for, which is a great graphic design and a great graphic designer to work with on an ongoing basis.

Tangible benefits and exceptional value for clients in relation to crowdsourcing are most evident in terms of the efficiency and speed of the crowd. For example in Firm E a client can start to have crowd output within minutes of posting a job and in Firm A, a crowd member posts output directed to clients every five seconds. In addition, Firm G crowd members contribute more than 350 crowd output entries per day. Such offerings also speak to client choice where four out of the seven crowdsourcing firms offer an abundance of crowd output choice for clients. Clients in a traditional model in Firm A’s industry would find themselves with a handful of choice offerings, but under Firm A’s crowdsourcing model may find they have a choice of up to 100 offerings, which also helps clients ‘envision and discover’. Firm A’s product manager states:

> so in the contest model, you have the advantage of seeing a lot of different designs from a lot of different designers all over the world, you know, multiple perspectives, if they are custom created for you, so you can – it really helps you envision and discover, you know, options, like design options that you wouldn’t have even considered, because a lot it is sort of “I’ll know it when I see it” sort of type thing, you literally see it and you’re like oh, , wow, that’s really cool, I never would have thought of that so you just get far far more than you would get just working with one designer.

Scalability is also a tangible benefit and affords exceptional value. With the availability of enormous crowd, crowdsourcing firms can afford to throw human resources at relatively minor jobs which require sheer people-power. Firm D, with its five-million-strong crowd can scale to 100,000 people on a given task in a relatively short time frame and for a relatively modest cost, which is competitive cost-wise with other rival offerings. Firm F can summon its ‘genius’ crowd of more than 10,000 data science PhD students to help solve commercial data problems in relatively short time frames. Such problem-solving goes well beyond that afforded by client firm’s internal capability and Firm F’s crowd has always performed better than client firm’s established data prediction models – at times up to 300% better (data scientist, Firm F).
Such crowdsourcing exemplars as this point to the collective intelligence of the crowd and clients are in a position to reap such collective intelligence at relatively minor, competitive-with-rival-firms cost outlay.

One of the benefits also afforded in the crowdsourcing firm’s crowdsourcing model is that clients are able to build individual relationships with crowd members and engage them for further work projects. Crowdsourcing in this instance is used as a recruitment tool for clients whereby the (contested winning) crowd output is a chief determinant in terms of ongoing client relationship. The CEO of Firm B states: “our customers (clients) have though for sure, they found really unique people in the crowd” and the data scientist at Firm F mentions: “it’s a way to get closer to companies that we want to work with...and they’re trying to hire, we can do a recruiting competition for them, they can hire the people who do well in that competition.” This system hints at an ultimate meritocracy –whereby good and competent work output is the chief determinant in hiring decisions.

Crowd members also reap benefits in this instance of building their own client base. Typical of the crowd’s comments in this type of instance is CM, crowd member, Venezuela: “Well, one of the things that motivates me is that I also get the chance to make business with people in other countries which can later become business partners for the company I am a part of.”

Some firms also make it clear that their crowdsourcing is cheaper for clients. For example, the CFO in Firm D says: “We can do it better, faster and cheaper, and I mean that, it’s better, it’s faster and it’s cheaper.” Five of the seven companies make claims to being cheaper for clients to use crowdsourcing through their firms than rival offerings. Firm C’s homepage on its website (Figure 7.2) sets up cost reduction as a major value offering for potential clients with a promise of a 50% cost reduction and a warning they are paying too much using rival firms:
Firm P mentioned that using crowdsourcing resulted in the third biggest campaign launch of a new product in a major market line in Australia in 2012. Given the campaign cost at least one-eighth of its rival firms in the top two spots, Firm P executives considered that using crowdsourcing for a major campaign presented exceptional value for the results they attained.

7.5.9 Theme 9 - Crowdsourcing fosters various types of value for the crowd (Links to RQ 2 value creation)

Crowd members also reap value from the crowdsourcing firms. The value reaped by crowd members fell into five main categories including employment/payment avenue, esteem-building path, learning opportunity means, time-filling avenue and fun/creativity avenue.

By far the biggest response from 17 out of 21 crowd informants with 71 individual remarks was that crowdsourcing firms provided employment and the opportunity to earn money. J.P., a crowd member from Firm A, based in the Philippines says: “It’s the prize money that I need, since I have for myself, I have expenses for a month, I am motivated, I have to work for this prize for a month so I can sustain my family’s need.”
Similarly, A.P., a crowd member from Firm C says: “Well actually, the main drive is money definitely because that’s what we actually work for.” In addition, K.K., a Firm D crowd member based in Canada makes mention of the difficulty of finding employment locally so crowdsourcing is a (partial) solution: “It is my sole income right now, it’s not enough to live on but it’s helping me. I live in a small community so it’s difficult to get a job in this area.”

While some crowd members mention ‘working for pennies and not for dollars’ (K.K, crowd, Firm D) others earn substantial sums. The founder and CEO of Firm E mentions: ‘the top (crowd) guy is making over $1 million a year’. A crowd member, P.B. from Firm F also mentions: “Well I don’t like to say just yet, but we won $500,000 - don’t – I don’t like to say until after June.”

However, it was not all just about payment. There were 52 individual references from over half the crowd informants (13) which spoke to value and benefits beyond payment alone. So payment was not simply the only value derived by the crowd from crowdsourcing firms.

Crowdsourcing appeared to provide the benefit of employment type choice for the crowd in terms of being able to provide full-time, part-time, casual and/or ‘time-filling’ employment. At least seven crowd members worked full-time and utilised crowdsourcing outside work hours. One crowd member based in the Philippines mentioned that he could perform the crowdsourcing work in tandem with full-time employment during quiet periods in his job during the day to earn extra income. At least six crowd members perceived crowdsourcing to be a full-time career or instrumental to their careers. One crowd member (P. J., Firm A) admitted to working up to 16 hours per day from eight o’clock in the morning until midnight. Another crowd member K.K. from Firm D admitted to working all day and every day: “you know, it’s one of the jobs that I enjoy so much that I wake up and turn on my computer to start tasking like as soon as I wake up and when I got to bed, it’s right after I finish tasking like I just can’t task any longer.” One crowd member (B.A. from Firm D) took comfort in the fact that the work was always available.
Another benefit related to employment and payment was the advantage of work-life balance. At least three crowd members mentioned having more time available for family members due to the availability of crowdsourcing as an employment avenue choice. Typical of the comments regarding the benefit of work-life balance enhancement was G. D., a crowd member based in Serbia of Firm A: “it was really great pleasure to work for (Firm A) and for me it was very pleasure work as a Freelancer. I had much more free time for me and for my kids because I have family, and I could work on projects I like, not every project I have to work on”.

For the crowd, value was derived from crowdsourcing firms via the personal qualities it helped enhance such as esteem-building or leadership-/team-building or philanthropy. Nine of the 21 crowd informants mentioned esteem as an important benefit from crowdsourcing. Although, conversely, one crowd informant, K.K. of Firm D, based in Canada, admitted to being privately embarrassed about the crowdsourcing work she did and made it clear she had told almost no-one else (except for the interviewer for this study) that she spent all day and every day crowdsourcing. This informant also admitted to feeling guilty that she was potentially taking money away from developing country fellow crowdsourcing members who needed it more than she did (in her opinion). All four informants of Firm C admitted to gaining philanthropic benefits from crowdsourcing due to the fact that the company encouraged staff to undertake additional philanthropic work as part of its training. Some crowdsourcing staff saw themselves as leaders in their crowd community and enjoyed giving back. One crowd member, K. Y. based in Canada, from Firm D mentioned spending time, for which she is not necessarily well compensated, clarifying the crowdsourcing firm’s glitches for the benefit of her crowdsourcing competitors whose English is less competent:

*Occasionally things don’t get paid because of like I’ll use “glitch” but meaning that you know, like something doesn’t happen in terms of a task verification or for whatever reason the task doesn’t pay I tend to be one that complains about it which takes a fair bit of time, but you post on their ‘get satisfaction’ forum and eventually it will come up in the list of things that they’re dealing with and typically then I do get paid and sometimes it’s with a small bonus, but the time spent to do that, is not worth the amount of money you get, I do it more just to kind of make some – try to find problems hopefully...Yes, hopefully, for myself but also in the big scheme of things it’s*
for other users, and because I have English as a first language, I can write you know, sentences that are clear and understandable, and I am willing to spend the time to kind of clearly state what the problem is and spell it out if need be, so you know, therefore I feel, I don’t feel it’s my responsibility quite, but I know that I can do it more easily than people who are struggling with English as a second language and that sort of thing.

Other crowd members mention learning opportunities as a major benefit and derive much value from these opportunities. In particular all crowd informants of Firm F mention learning as a major value outcome. Typical of the comments relating to learning as an important value outcome of crowdsourcing was from P. B. based in Australia, a crowd member of Firm F: “I mean, there can be thousands of teams in these competitions, you can’t, you don’t expect to win, you expect to learn.”

A fourth value element for crowd members is the ability to use crowdsourcing to simply fill in spare time, perhaps as a hobby. One firm informant, P.B. of Firm F, based in Australia, mentioned the crowdsourcing he participated in to be a “bit of a hobby to be honest”. One firm informant, the CFO at Firm D related an amusing story of a crowd worker he knew who worked long hours every day on crowdsourcing tasks at Firm D to pass the time as a way of avoiding her now at-home-full-time retired husband.

A final value element for crowd members is the fun and/or creativity they can derive from crowdsourcing. In terms of the work being fun, 19 of the 21 crowd informants mentioned that the crowdsourcing work they do could be considered fun. As Firm C’s P.A. based in Nepal, says: “there are some tasks which are really fun to do, it’s like not for me work”. In terms of creativity, three of the seven firms encourage highly creative submissions of their crowd. As Firm G’s G. J., based in New Zealand, mentions in relation to crowdsourcing and creativity:

I just liked the idea that you could kind of work on your own creative thing... so I decided to leave my job and do it, right I really enjoy this creative side, I’ll see how it goes and if nothing happens I’ll just go back into the workforce, and that was like five years ago.
7.5.10 Theme 10: Firm and crowd relationship is important and at times symbiotic
(Links to RQ 1 essential features and practices and RQ 2 value creation)

In the interviews all 21 crowd members were asked if they trusted the crowdsourcing firm for which they provided crowdsourcing work. The term ‘trust’ was posed in the question without any overlaying explanations or definitions of ‘trust’. From the responses elicited by this question it appears that most crowd members interpreted ‘trust’ in straightforward terms relaying a ‘benign relationship’ affect. Out of the 21 crowd member informants all members indicated they trusted the firm, albeit in three instances the response seemed to indicate the trust experienced was between the firm’s clients and the crowd member. Only one respondent (K.Y., crowd, Firm D) gave a moderated and possibly sceptical response in terms of a lower level of trust in the firm:

Hmm. Trust them? Look I probably do now, because I am doing some of this extra stuff, so I’ve had some one-on-one communication with some of the people there, but without that, no, they’re not a company that I would say that I would trust. Because now I’ve had specific one-on-one communication but before, like before that, I still think that they have a long way to go in terms of their organization and kind of seeing things through and making how those of us that contribute and do this work for them which ultimately means they get paid their salaries, I don’t think we get treated very well overall, but because of the situation – I’m in a little bit of a special situation compared to the other millions that are out there, and because of that I have developed a level of trust and that is simply I mean because of that direct communication.

Generally the crowd informant response signifies overall that some level of trust has been established between the crowd and its crowdsourcing firm, or clients in some cases. A typical response from S., crowd member of Firm D is:

Yes actually, over the last I would say six or eight months I’ve actually had phone conversations with a couple of the (Firm D) employees and that actually helped to build a relationship because it gave me a better understanding of what (Firm D) was about and what their views are and their role in their current jobs as well as what they are planning to do in the future with (Firm D).

In terms of the qualitative survey, seven crowd informant respondents answered the question and six indicated they trusted the firm. The seventh indicated that: ‘I don’t trust people so easily’. A typical response from a crowd survey respondent is:

Yes, it’s a trust between worker and the agent for whom we work that has led us all the way to where we are now. They trust us for how best we can work and we trust them for what we get from them. So, I can say we do have a relationship of
trust between us.

There is an element in this response of symbiosis, that it that both parties have a relationship between them, which works to the advantage of both parties.

One aspect of surprise in the study was that some of the crowdsourcing firms with enormous crowd workforces of multiple millions would be able to establish any sort of trust or inspire any sort of relational affect in its crowd. Indeed one of the senior managers (CFO) in one of the largest crowd-resourced crowdsourcing firms (more than five million strong crowd and a 1:100,000 staff to crowd ratio) reached out – completely unprompted and unsolicited - to me the researcher, as a result of observations and posts entered on a public web-board on a crowd-support website (www.getsatisfaction.com) aimed at primarily eliciting crowd feedback.

Hello there

I am reaching out following one of your posts on the (Firm D) forum’s board, since I would be very interested to learn a little more about your field of study.

(As it happens, I am originally a Melbourne boy myself, having grown up in Blackburn and Mitcham, and have migrated back and forth between Australia and the USA nine times in my life. I still serve on the boards of two little Australian tech companies as well.)

I would love to just hop on the phone and have a chat if you would be available to do that. Perhaps you could provide me a number and a couple of times that would suit you to have a conversation.

I look forward to talking with you.

Through this quite personalised feedback, a rapport was established between me and Firm D’s CFO, who eventually provided a lengthy interview for the study.

In terms of the firm and its view on the importance of curating its crowd to fashion a benign trusting relationship at some level, it would seem that generally this would be seen by firm executives as an important element in their ongoing success. Again, there is an element of symbiosis in the curation of trust and a ‘relationship’ which seemingly works well for both firm and crowd. All firms, except one (Firm D), had dedicated crowd community pages on their website or a dedicated Facebook site in one case. These crowd showcasing web-pages would feature crowd member achievements, post
profiles of individual (successful) crowd members, interviews of selected crowd members, tips on how to succeed as a crowd member, dedicated web-based places to post written dissent, issues or problems, individual crowd stories and testimonials of crowd members involving the firm as well as pictures, images and video feeds of crowd activities. Almost all of the firms had dedicated online areas where crowd members could help, communicate, share and interact with other crowd members. One firm (Firm E) had also set up reward points based on the amount of experience each crowd member clocked up. Interestingly, one of the crowd rewards was the possibility of a 20-minute interview with the founder and CEO of the firm.

It is especially remarkable that any type of relational aspect can flourish between firm and crowd and that relationship establishment is given any priority by crowdsourcing firms given the staff to crowd ratios in the study firms range between 1:3,000 and 1:100,000. In addition there is the fact that three out of seven of the firms report that there is a crowd over-supply and/or that it is relatively easy to attract large crowds.

Firm P posited that the relationship they had with the crowd was important enough for them to respect their feedback to the extent that the firm advocated and used so-called prosumerism, where consumers are involved at the commencement of and during the developmental lifecycle of the new product development cycle (Senior Innovation and Brand Manager, firm P).
8. FINDINGS 2 – CROWDSOURCING VALUE CREATION, PRACTICE AND ESSENTIAL FEATURES

8.1 Introduction

This chapter will proceed to discuss the findings against both research questions at length and examine what the phenomenon of crowdsourcing is, then how it works and then how it creates value.

Both the prequel-phase initial impression-forming stage as outlined in Chapter 3 and the interview-based informant thematic coding (Chapter 7) worked together to help uncover the type of business, the operational aspects of and the value aspects of crowdsourcing firms. The enquiry in the findings in Chapter 7 revealed that the crowdsourcing businesses self-identify as a unique type of trailblazing business model which is disruptive to rival businesses in the same industry. Therefore, crowdsourcing firms establish competitive advantage through innovation, novelty and through a belief that the firms are heralding industry disruption. The firm owners self-portray as innovative trail-blazers who run novel businesses which are moving to disrupt like firms in the same industry. Functioning and operational aspects are unique and important and value is derived and created by and for all three parties, including firm, client and crowd.

In this chapter findings are presented which relate the findings from the previous chapter (Chapter 7) directly to both research questions. This chapter develops *dynamism* in relation to the findings presented in this chapter. That is, it is shown in this chapter how the concepts in the data structure presented in this chapter relate to each other and will present some *dynamic* frameworks utilising the thematic data and aggregate dimensions along with aspects of the prequel findings in Chapter 2 (Gioia, Corley & Hamilton, 2012). The grounded theory emanating from this study will present a grounded view of how crowdsourcing is practiced in crowdsourcing firms and related frameworks of how value is created in crowdsourcing firms emanating from the data collected as part of the study.
The discussion of the research questions in this chapter places them in reverse order, so that RQ 2 will be discussed first and RQ 1 second. This was done so as to more closely follow the end-point of Chapter 7 which more focusedly points to overall value creation – the most critical finding in the thesis - and warrants a more immediate follow-on pertaining to a related data structure and ensuing value creation framework.

8.2 Aggregate dimensions from 10 second-order themes

Leaving from the establishment of the individual 10 themes in Chapter 7, the final step in the structuring of the data was to group those individual 10 themes into three representative aggregate dimensions. This was based on recursive cycling of raw interview data of both interview groups (firm executives and crowd) as well as some archival web-based firm data until the data reached its revelatory limit and no new thematic relationships were apparent (Gioia, Corley & Hamilton, 2012). The aggregate dimensions are represented in Figure 8.1 below. The concepts represented at Figure 8.1 have been created from the ground up and denote the type of business, how the business works and, in addition, how it is designed to create value.

These aggregate dimensions emanated from thematic grouping of second order themes and fell into three top categories. These categories included the type of business crowdsourcing is, how crowdsourcing business works and crowdsourcing business design elements. In terms of what type of business crowdsourcing is - the dimension summarises the three second-order themes feeding into it. This summary represents the type of business which uses crowdsourcing as its main revenue raising activity so the business is entirely based on crowdsourcing which is new, unique and disruptive. The second aggregate dimension shows that crowdsourcing works through the crowdsourcing firm having to attract clients and large crowds who willingly participate anytime and anywhere. The final dimension is the crowdsourcing firm value creation design which summarises four second-order themes into a single dimension. This dimension reveals that crowdsourcing business is designed by crowdsourcing firms to create value for the crowdsourcing firm and provides tangible value benefits for both clients and crowd. The firm’s relationship with the crowd is also an important feature of this dimension.
The firm was born crowdsourcing
Crowds in crowdsourcing firms are sourced from organically-formed, pre-existing crowd communities

FIGURE 8.1
Final Data Structure: 1st Order Concepts to 2nd Order Themes leads to Aggregate Dimensions

1st Order Concepts
Crowdsourcing is a new and unique type of business
Crowdsourcing firm owners think differently
Crowdsourcing firms are disrupting industries
Crowdsourcing firms are highly innovative

2nd Order Themes
1. Crowdsourcing-born firms form from pre-existing, organically-formed crowd communities.
2. Crowdsourcing firm owners are pioneers and trailblazers
3. Crowdsourcing businesses are innovative and disruptive to other businesses
4. Crowdsourcing incorporates efficient transactional processing of large numbers of people and jobs and/or projects
5. The crowdsourcing business, its clients and its crowd are all essential elements to successful operation
6. Crowdsourcing is available at all times to people willing to participate
7. Crowdsourcing offers a competitive advantage over traditional businesses
8. Crowdsourcing offers tangible benefits and exceptional value for clients
9. Crowdsourcing fosters various types of value for the crowd
10. Firm and crowd relationship is important.

Aggregate Dimensions

Essential Characteristic (RQ1)

Crowdsourcing-born firms form from pre-existing, organically-formed crowd communities.
Firms based on crowdsourcing are new, unique and disruptive
Crowdsourcing firm owners are pioneers
Crowdsourcing businesses are innovative and disruptive to other businesses
Crowdsourcing incorporates efficient transactional processing of large numbers of people and jobs and/or projects
Crowdsourcing firms must attract clients & large crowds who participate anytime/anywhere
Large crowd numbers are important in crowdsourcing firms
Crowdsourcing firms are global Internet-enabled business and always on
Crowdsourcing is available at all times to people willing to participate
Crowdsourcing offers a competitive advantage over traditional businesses
Crowdsourcing creates business value & provides tangible value benefits for clients and crowd

Essential Functioning (RQ1)

Crowdsourcing firms represent an activity system or business model innovatively incorporating demand & supply elements
Crowdsourcing firms would falter without all parties including company, client and crowd participating
Large crowd numbers are important in crowdsourcing firms
Crowdsourcing is a new employment avenue involving participating and at times self-managing crowds

Crowdsourcing firms are faster, better, cheaper and reduce risk for clients
Crowdsourcing firms are global and always available
Crowdsourcing firms operate at huge size & scale
Crowdsourcing firms can have a social benefit which also generates profit
Crowdsourcing firms offer more choice to clients
Crowdsourcing firms enable superior service offerings
Crowdsourcing firms offer participatory client engagement
Crowdsourcing firms enable unprecedented scale over short-term periods

Value drivers (RQ2)

The crowd may attain employment, income, career/personal development, esteem, a creative or philanthropic outlet, work-life balance, learning, teaming/-client-building- & leadership opportunities.
Firm must establish a form of relationship and curate a level of trust with the crowd.
8.3 RQ 2 - Crowdsourcing and value creation

This chapter initially presents findings relating to the second research question: How does crowdsourcing create value for the key participants in crowdsourcing transactions? This is considered the most critical finding and relates most closely to the thematic data structure (Figure 8.1). Therefore it is considered prior to consideration of the first research question in this chapter. The findings related to the second research question are featured later in the chapter.

As alluded to earlier in Findings 1 (Chapter 7), the themes most directly relating to value creation were concentrated in the last block of grouping (items 7 -10) under the ‘second order themes’ heading in the data structure (see Figures 7.1 and 8.1). However, this (more concentrated) grouping does not preclude some of the other ‘second order theme’ grouping items (items 1-6) being also related to value creation. This chapter will provide some linkages of value creation with its essential characteristics and its essential functioning (practices).

To recap, the incomplete data structure introduced in Chapter 7 at Figure 7.1 and then presented in final established form at Figure 8.1 illustrated three derived aggregate dimensions from the ten established coded themes:

1. Firms based on crowdsourcing are new, unique and disruptive (RQ1);
2. Crowdsourcing businesses must attract clients and large crowds who willingly participate anytime and anywhere (RQ1); and
3. Crowdsourcing creates business value and provides tangible value benefits for clients and crowd (RQ2).

The data fell into three distinct groupings including:

1. What crowdsourcing firms are: Essential characteristics (RQ1);
2. How crowdsourcing firms work: Essential functioning (RQ1); and
3. The value creation in crowdsourcing: Essential value drivers (RQ2).
As can be seen from the data structure in Figure 8.1, the first of the three aggregate dimensions emanating from the second order concepts built from the grounded interview data was essentially a first glance of what crowdsourcing is. The essential characteristics of crowdsourcing are summarised in the first aggregate dimension and those concepts leading into it.

And so it is that some of the value associated with crowdsourcing can be seen as being invested in actually what it is. The essential characteristics of crowdsourcing can be linked, in part, to its value creation potential. The very fact that crowdsourcing is a novel means of achieving value-capturing productive output by large numbers of crowd members who willingly respond to open calls and oftentimes willingly participate with little or no payment is a value-creating element per se. The elements which it embodies of being often a system of innovation and a movement to industry disruption also contribute to its value creation credentials. The notion that what it is, in fact, is a new way of doing business and that it invents a new source/manner of collecting labour and productive output. This also speaks to its value creation potential and/or realisation. Inherent in what crowdsourcing is, in essence, is the understanding that it is a system of mutual benefit for all parties. Clients get results “better, faster, cheaper” in the words of the CFO of Firm D. The crowd reaps a variety of value, through a key feature of what crowdsourcing is, that is, chiefly a new method to source work and potential payment.

From the data structure in Figure 8.1 above, it is apparent that the second of the three aggregate dimensions from the grounded interview data speaks to how crowdsourcing works or functions; how it essentially operates and relates to the first research question in relation to crowdsourcing practices. And, so, how crowdsourcing works is an essential feature but it also may be perceived as a key value creating element. Ultimately it functions as a highly efficient mediator of crowd output against firm/client request, with crowds rapidly scaled up or down to meet demand and with its (the crowd’s) excess output being effectively managed by the firm so as to be not cost prohibitive. Crowdsourcing functions so that it is fully task-centric, although, despite that, it can function to be affect-driven through crowd-firm and/or crowd-client relationships, which work to ultimately foster trust. Such trust-enablement creates value through its key role in creating a crowd attraction pull. Such a pull allows the crowds to
operate with a level of satisfaction that they will be dealt with fairly and that in some cases they can use such relationships to build their own clientele from clients met through crowdsourcing interactions. It is nevertheless remarkable that any crowd-originated affect-driven sentiment was present (and it was) given the sheer numbers of crowd members and the seeming easy replace-ability of individual crowd members.

Crowdsourcing can be seen as a system involving all three parties of firm, crowd and client and is not just a simple firm routine or a single firm competency or an activity. The value in crowdsourcing as a system points to its originality of and the unique properties of its efficient operational design and part of its essential characteristics of innovativeness. For crowdsourcing is a system which subverts the notion that a firm’s crowd work producers cannot also - within the same system - function as its decision-makers, waste reducers and consumers as is the case with Firm G, for example. Crowdsourcing firms’ clients, likewise, in some forms of crowdsourcing such as that practised by Firm A, help create value by providing considerable self-serve style labour and also oftentimes helping to choose the best results from the many offerings and at the same time cull the unwanted crowd input.

From Figure 8.1 above, it appears that the value drivers of crowdsourcing emanating out of a combination of all three aggregate dimensions from the grounded interview data can be represented by a framework which illustrates how the elements are related. Such a new framework can illustrate how the three dimensions highlighted in Figure 8.1 work to point to value elements. So, Figure 8.2 below provides a summary illustration of the dynamism between all of the concepts established at the thematic stage as illustrated at Figure 8.1 above.
The framework in Figure 8.2 above summarises the phenomenon of crowdsourcing in relation to crowdsourcing firms and how they function. The crowdsourcing firm’s essential characteristic - essentially what the firm is - creates innovation-based competitive advantage. How the firm functions creates value for all stakeholders.
Clients, due to their willingness to be participative and engaged, and due to their essential characteristic of being early-adopters and therefore ‘edgy’, reap value benefits from crowdsourcing. The crowd, due to their large combined size and global, participatory essential characteristics reap value benefits. All three stakeholders combine to function toward mutual benefit and thereby reap symbiotic value benefits.

The framework combines two major elements of the phenomenon of firm-based crowdsourcing. The first is what each individual stakeholder (executive, crowd and client) contributes and benefits apropos value, illuminated by a direct link to value benefit creation. The second is how the phenomenon functions to create value. The third is the systemic combination of all stakeholders to create value.

Extrapolating from the above framework, in order to simplify to the core elements, the figure below (Figure 8.3) summarises the key high level value drivers of crowdsourcing based on the data of the study. This Figure was refined from Figure 8.2 above in order to show the starkest and most important elements related to value.
**FIGURE 8.3**
Value creation drivers in crowdsourcing

<table>
<thead>
<tr>
<th>Innovation (Essential characteristic)</th>
<th>Firms based on crowdsourcing are new, unique &amp; disruptive</th>
</tr>
</thead>
<tbody>
<tr>
<td>- New way to organise business &amp; recruit workers</td>
<td></td>
</tr>
<tr>
<td>- Novelty, openness, firm boundary re-conceptualisation, moving to disruption</td>
<td></td>
</tr>
<tr>
<td>- New ‘system’ of business – combines all 3 parties in a unique &amp; significant manner</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attraction / Engagement (Functioning)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Attracting &amp; keeping large crowds, clients</td>
<td></td>
</tr>
<tr>
<td>- Establishing trust</td>
<td></td>
</tr>
<tr>
<td>- Incentive placement</td>
<td></td>
</tr>
<tr>
<td>- Collective intelligence</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size &amp; Scale (Functioning)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Enormous &amp; increasing crowds</td>
<td></td>
</tr>
<tr>
<td>- Unprecedented scaling of human resources</td>
<td></td>
</tr>
<tr>
<td>- Global reach, developed &amp; developing</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Efficiency (Functioning)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Reduced transactional costs</td>
<td></td>
</tr>
<tr>
<td>- Output/task/results focus</td>
<td></td>
</tr>
<tr>
<td>- Self-service, self-selection</td>
<td></td>
</tr>
<tr>
<td>- Economies of scale and size</td>
<td></td>
</tr>
<tr>
<td>- Opportunism reducing strategies</td>
<td></td>
</tr>
<tr>
<td>- Asset specificity/sunk cost reduction</td>
<td></td>
</tr>
<tr>
<td>- Combining all 3 parties in efficient system</td>
<td></td>
</tr>
</tbody>
</table>

Figure 8.3 above distils the value creation for all three parties into one high level framework. The four key sources of value creation in crowdsourcing that have emanated from the data in the study include: Innovation, Attraction/Engagement, Size/Scale and Efficiency. All these four value drivers resonate with the established strategic management literature in value creation. Each source of value creation has elements of inter-relationship with each of the other sources. These value creation sources and their inter-linkages are elaborated below.
8.4 Crowdsourcing Value Framework

An analysis of each of the four main value drivers illustrated in Figure 8.3 is contained below. The four value drivers are then further amplified in Table 8.2 (later in this chapter), which summarises how the value drivers are individually expressed in each of the firms in the study.

8.4.1 Crowdsourcing Value Framework: Innovation

The first value driver in Figure 8.3 above is ‘innovation’. Innovation is both an essential feature of crowdsourcing and a value driver and thereby links with both research questions. In terms of how crowdsourcing innovation was perceived by the informants, interestingly, a number of crowdsourcing firm executives self-perceived as thinking differently, or being different. One crowdsourcing business owner/founder (Firm E) mentioned that it was not obvious that this type of business could ever work when he commenced it. He now has an attracted crowd in excess of seven million, having only founded within the past five years. The first-mover risk-taking associated with ‘non-obvious’ future business success associated with a new business phenomenon combined with the trailblazing unique thinking characterised by crowdsourcing owners combined with one of the newest ways of organising a business and the forming of value for all three stakeholders point to a potent form of innovation. The unique properties of crowdsourcing – differentiated from those of related business models of outsourcing and offshoring – focus exclusively on delivering client’s output, through a highly meritorious system. This means that the client chooses the (best) end-product out of all end-product choices presented and such decisions tend not to be based on common prejudices around race, nation, geography or gender for example because these factors tend to be hidden. It is the end-product that is critical in crowdsourcing not the process. This end-product is delivered in many crowdsourcing firms direct to the client who is in the position to choose the best out of the completed work. Neither the client nor the firm pay for the process of completing the work, such costs are borne individually be the individual crowd members themselves. This is quite different to related models of offshoring and outsourcing, where traditionally individual units of work are paid by the firm/client.
Crowdsourcing helps to deliver completed work to clients quickly while giving them a plethora of choice and options via a fast, cheap and efficient online system, where constraints around geography, time zone, race, nation, gender and in some cases language (some design sites require image/picture creation only) are greatly reduced. Even the polar firm, Firm P, set up mobile-phone mediated technology so crowd informants could send data including Geographical Positioning System (GPS), sound and image data, in real-time around the clock from wherever they were geographically. Rather than having to recruit workers, crowdsourcing businesses allow clients to simply post what work they want completed and the human resources come to them and complete the work, at no initial, upfront cost to the client (apart from their time to outline the work required). The innovation around the combining and bundling and reversal of traditional client/consumer/worker roles is another key element of crowdsourcing. Clients and workers blur in some crowdsourcing models. In Firm G the firm’s end-point consumers have oftentimes earlier in the process been the firm’s workers. Firm G has three different crowds, which are not mutually exclusive, which provide various form of work and which later also purchase the products. These crowds often fill other functions such as public relations and marketing on behalf of the firm – all without payment.

Innovation is linked with the value driver of attraction/engagement. The attraction of large crowds coupled with their sustained engagement and mutual trust establishment along with the engagement of clients is central to the workings of crowdsourcing and its new way of doing business. Collective intelligence was also a factor which linked to crowdsourcing’s innovation. As mentioned earlier, collective intelligence is group wisdom and defined as individuals within a group doing things collectively that seem intelligent (Malone, 2006). The potential harvesting of the crowd’s collective intelligence in some instances of crowdsourcing also represents a potent type of innovation and a new superior way of solving client-based problems. Firm F, which claims a ‘genius’ crowd has grounds for claiming that it produces collective intelligence. It has solved a number of long-standing difficult data problems in a number of industries, including, for example, a decades-old data mapping problem which NASA could not solve internally.
8.4.2 Crowdsourcing Value Framework: Attraction/Engagement

The second value driver in Figure 8.3 includes both ‘attraction’ and ‘engagement’. This value driver is also linked to the practice of crowdsourcing, that is, its functioning. The data from the study suggests that the value-creating potential of crowdsourcing is closely linked to the firm’s ability to attract large crowds, engage oftentimes self-servicing clients and have highly speedy and heavily automated transactions. The establishment of ‘attraction’ in crowdsourcing brings in the core value-creating element of the actual (large) crowd – which is the element that most differentiates crowdsourcing from other types of perceived similar processes/business models like outsourcing or off-shoring – where the workforce is formally selected, contracted and paid by the firm.

The firm must attract, retain and maintain their huge crowds in order to bring in clients looking for speed of beginning-to-end-point transactional process, choice, variety, diversity, core task-focus and lower costs. In addition, more surprisingly, the firm must be doing the attracting while paying such crowds either overall relatively small amounts of payment or not paying them at all – quite different to outsourcing/offshoring.

The stickiness of the attraction appears to be increased by the firm’s own appeal to the crowd, particularly in some part due to the mutual affect between the firm and the crowd (and in some cases between the client and crowd). The mutual trust established and the feeling by the crowd that the firm is helping them in some way is important. It seems that the crowd see the firm helping them in a number of ways, such as by providing payment, by providing new clients to crowd members looking to build their own business networks, by providing flexibility, by providing learning opportunities or by providing and grooming a community that is appealing to the sum of its individual crowd members. This mutual trust, the presence of positive emotional affect and the attraction both of these factors build as a result is a key source of value creation in crowdsourcing firms.

In the data, there were 40 references from 12 firm-based sources from the crowdsourcing firms which discussed their respective firm’s various efforts involving ‘crowd curation’. Even firm P, which is not a crowdsourcing firm but simply used it
during a major project, provided crowd curation via awarding small new product rewards to its crowd participants and even one major reward, that being a bronze statue of one participant. The curating of each respective crowd was seen as a somewhat delicate proposition in a number of cases and a very necessary competency inside each firm. Most firms in the study were very mindful of their crowds and knowledgeable about what the crowd’s negative and positive issues were in relation to their own respective systems of crowdsourcing. The crowds likewise had strong views of the firm. The data showed 41 individual references from 13 crowd sources about the firm, with literal words by the crowd expressing (positive) opinions and some emotional affect about the crowdsourcing firms like “thankful..friendships.. interesting.. a reliable job giver..continuously listening to our feedback..very happy to be working here..is really very good..a good organisation out there helping people.. I enjoy doing the tasks.. so easy to deal with..I want to stay.. they are trying to do something honestly.. it’s exciting to watch this company..Trust them? Look I probably do now..Do I see a value? – Yes..for people like me it expands our reach..they’re quite good now..you were kind of celebrated (by the firm).” So despite huge crowd numbers, each firm has managed to maintain a type of attractiveness and has cultivated (generally positive) feelings from respective crowd members that they are part of a valued community and are reaping their own personal value from this community.

8.4.3 Crowdsourcing Value Framework: Size/Scale

The third value driver illustrated in Figure 8.3 includes both ‘crowd size’ and ‘scale’. This value driver also links to both the essential characteristics and practice of crowdsourcing. The sheer enormous crowd size and the ability to scale the crowd up or down very rapidly in a cost effective manner are key sources of value creation of crowdsourcing. The fact that the crowds in all crowdsourcing firms appear to be growing exponentially speaks to several trends happening across the globe currently. One of the trends is that the ‘bottom of the pyramid’ developing country populations, that is the collective markets of low-earning individuals, are rapidly becoming part of the global world of e-business through increasing take-up of Internet-enabled devices (Kleiner, 2010). This trend helps to deliver a voluminous crowd to the potential crowdfold. So the sum of individuals potentially joining the crowd is increasing exponentially. As the CEO and founder from Firm E says:
...we’ve got 7 million users, we could have 700 million users and still be getting going right. In fact the other 5 billion people on this planet are going to be potentially customers for us, and many of them also want to get a job so you know, we’re in a very good position in terms of the way things are heading with internet growth and so on, so we just focus on keep getting growth up there, keep the revenue up in triple digit realm if we can.

This trend offers incredible potential scope for crowdsourcing firms to scale on levels numbering in the 100 million or even billion in terms of crowd size. In terms of geographic and human resource diversity available to businesses which avail themselves of crowdsourcing this trend is set to explode and will surely alter the employment landscape from now and heading into the future.

However, many of the crowdsourcing organisations report on sizeable numbers comprising both developed and developing country crowd members. So the signing-on of developing country participants to the world of Internet connections and global e-business is only part of the picture contributing to the sheer size of crowdsourcing crowds. As an aside, there was one crowd member from a developed country who unexpectedly expressed some level of guilt over participating in crowdsourcing in competition with developing country participants. Crowd member K.K. (Firm D), based in Canada, mentions:

Well part of me feels a little bit guilty for doing this because I know there are a lot of people who need the money more than I do, and especially people in third world countries, I know that making a dollar a day is a lot to them whereas I think it’s horrible. You know what I mean. While I am doing it I do feel guilty...

While some commentators express horror at perceived exploitation in crowdsourcing putting forward a view that it is a modern incarnation of a ‘digital sweatshop’ (Cushing, 2013) and makes good use of burgeoning crowds of cheap labour in developing countries, this is not always the case. One of the study’s crowd members from Firm F, PB, mentions winning $500,000 and $40,000 respectively in two crowdsourcing competitions he has entered. This is clearly substantial payment and a far cry from the ‘digital sweatshop’ moniker. Furthermore, the owner/CEO of Firm E in the study mentions that his top crowdsourcing crowd member earns more than a million dollars annually – again a far cry from race-to-the-bottom of below-minimum-wage levels.
Another related trend is that of workforce scaling flexibility on a scale unheard of until relatively recently. As Shingles and Trichel (2014) state in relation to modern companies: “The goal is not just cost savings but also quick access to specialized resources, the ability to dynamically scale up (and down) around workloads, and geographic coverage in quickly changing markets.” A potent example of this remarkable, fast and up until now, unprecedented scaling is borne out by the crowdsourcing services offered by the CTO of Firm D:

So the fact that the client can come to us and say, hey I need this job done by tomorrow, and we can scale up to a pool of thousands of people to get that completed is something that they greatly appreciate, and they’re paying probably the same cost if they had gotten it done by a traditional outsourcing firm over say a week’s time. A ton of value is in having that flexibility. Also not knowing your volume, so if they come to us and we give them a contract, generally it’s very flexible, in that today you might have a thousand pieces of content, and tomorrow you might have ten thousand or one hundred thousand, so we can actually scale for that and it doesn’t drastically increase your cost nor does it take a big amount of time to actually make that happen, whereas it would with a traditional outsourcing firm or an internal team.

A third trend is that crowdsourcing offers people already employed the chance to advantageously and contingently co-mingle their on-site paid work and their crowdsourcing work at periods of downtime or during quiet periods during their work cycle – a sort of double-dipping if you will. Other crowd members will combine crowdsourcing with paid work after formal work hours during their leisure time on the same working day. These practices are made possible by the very ephemeral and highly flexible nature of the crowdsourcing work, which makes it possible for crowd members to quickly enter and quickly exit (thus boosting the size and scale of crowdsourcing firms) by means of the fleeting nature of the crowdsourcing work offered or by means of making a quick content entry in an open competition.

This is particularly the case in ‘microtasking’ style of crowd work, where crowd workers can avail themselves of a few cents for a fleeting, few minutes of work. This effort would be expended on work which may not be overly mentally taxing, so could be easily combined with co-mingled employment at a more regular work site.

Work such as that offered at Kaggle, where data analysis competitions offering at times serious cash prizes of $1 million and over, sees many crowdsourcing competitors
dabbling in these competitions as ‘hobbyists’ in their leisure time. A crowdsourcing individual competitor like this (Mr Brierly) who had a well-paying full-time regular job was featured on Australian Broadcasting Commission’s television Science-based program Catalyst (http://www.abc.net.au/catalyst/stories/3296837.htm). All four crowd members of Firm F were, likewise, holding full-time positions and crowdsourcing in their spare time. Many of these ‘hobbyists’ did not receive payment and one (P.B., Firm F) had this to say: “if you paid me my daily rate, what I charge, if (Firm F) paid me my daily rate for time I’ve spent in I’d be a billionaire by now. So it’s not about money.” This is one of the key value drivers of crowdsourcing - getting a ‘billion’ dollars of work from the (vast) sum of individuals comprising the crowd for a nil or a relatively modest outlay. Through the sheer size and scale of crowdsourcing, crowdsourcing firms (and their client base) avail themselves of thousands, millions and potentially billions of dollars of labour but do not pay for each unit of such labour – only for that which is the very best of all the sums of all of the crowd’s combined labour. This is a potent value creation driver in crowdsourcing firms.

8.4.4 Crowdsourcing Value Framework: Efficiency

The final value driver illustrated in Figure 8.3 relates to ‘efficiency’. The efficiency of the firm-crowd-client exchange in crowdsourcing increases the transactional efficiency and lowers transactional cost overall and this thereby translates to a primary value driver. Some of the efficient cost minimising governance structures inherent in crowdsourcing include the generic ‘one-size-fits-all’ governing contract which covers all online transactions, the one-stop-shop efficiency, helping to reduce search costs, of the single locational website and the strict rules of conduct protocols, helping reduce bargaining costs, for online transaction between all parties combined with the self-policing behaviour demonstrated by the crowd work to reduce opportunism and provide more symmetrical, dependable information to all parties.

As stated in a recent trend report by Deloitte (Shingles & Trichel, 2014, p.32-33): “In crowdsourcing, the needle in the haystack comes to you, with skills and interests aligned to your ask. Buyers can access large pools of people in short order, typically at low transaction cost.” The efficiency of this model reduces search and information costs greatly making for a more efficient mode of sourcing work than traditional methods.
All of the crowdsourcing firms in the study exist to provide an efficient doorway for clients to gain access to the global, open market of the ‘crowd’. These firms have cultivated huge and sometimes specialised crowd-based marketplaces and offer clients the advantage of accessing these huge crowds with a few simple keyboard clicks. Each crowdsourcing firm can provide its clients a near-instantaneous experience of interacting with the crowd ‘marketplace’ to procure services or products. For example, Firm E claims that its clients will often receive crowd response within a mere 10 seconds via its online portal. Such speed/scale efficiencies have only been made possible by the advent of such new communication methods fostered by global Internet networks and huge numbers of potential crowd members (many in developing countries) gaining access to such communication networks.

The crowdsourcing firms in the study work against potential market frictions and thereby work to reduce transaction costs by a variety of means. Each crowdsourcing firm for example is ‘task’ or output focussed so that the actual finished product/service is delivered direct by the crowd to the client without further transactional costs such as bargaining costs. Search and information costs are reduced in crowdsourcing because the crowd resides in one cloud-based location via a single website entry point. Asset specificity is reduced because the crowd is huge, global, ubiquitous and ever-changing – in theory it is an almost boundless and boundary-less resource. The concept of sunk cost as a transaction cost for the crowdsourcing firm is also greatly reduced by the fact that the crowd is not paid to be simply present as a traditional workforce is. An outsourcing firm will engage staff to be present and pay them even if they do not actually productively perform every second of every hour they are employed. However it is different for crowdsourcing firms. For example, Firm E currently claims to have a crowd of 11 million but does not sink costs into, that is, pay the 11 million to be waiting in its cloud to compete for work and, in fact, only pays a miniscule percentage of those 11 million who are successful in submitting work that is deemed excellent enough to be chosen by the client.

The uncertainty which can present a transaction cost is reduced in the crowdsourcing firms in the study via the strict techno-rules based interactions between client and crowd which are highly automated. Such highly automated, techno-driven and strict rules
based online transactions can also reduce information asymmetries between the crowd and the client. In addition, the crowd and to a certain extent clients also both self-select to participate which helps to mitigate uncertainty. Firm F has stated that every aspect of every crowdsourcing contest they run is technologically automated right down to the decision on which crowd member (or team) is ultimately successful.

Market friction and transaction costs can be increased via opportunism from the firm (via the client) directed to the crowd. For example opportunism can be present at times when a client takes advantage of work presented by a crowd member or members and uses it but does not provide payment. Ultimately, such an opportunistic (non-paying) client will be eventually ‘blacklisted’ and avoided by the crowdsourcing firm but it does not help those members of the crowd who were opportunistically disadvantaged initially. One crowd member (Firm E) mentioned he had strategies for limiting opportunism, which included only completing relatively small work assignments from crowdsourcing clients until he had established a relationship of trust with them.

Despite the relatively small instances of opportunism present in crowdsourcing transactions, most of the crowdsourcing firms have set up systems to avoid non-payment opportunism. In most cases clients have to pre-pay or avail their credit accounts to the firm for auto-payment when the transaction is successfully completed.

Potential transaction costs related to economies of scope and scale are significantly reduced in the study’s crowdsourcing firms via the size and scale afforded by the large crowds attracted to the crowdsourcing firms. All productivity in crowdsourcing firms is magnified by the sheer voluminous nature of the crowds and their output potential. Productivity is also enhanced by the ease, speed and relatively affordable costs by which such crowds can be scaled up or down on demand. Traditional market friction elements of firms having to search, find, select, hire, bargain, contract, train and instruct a productive workforce is greatly reduced in crowdsourcing via its size and scaling characteristics and its payment-for-successful-output-only regimen.

8.4.5 Crowdsourcing Value Framework: Illustrative value drivers for each firm

The four key value drivers in Figure 8.3 including ‘innovation’, ‘attraction/engagement’, ‘size/scale’ and ‘efficiency’ have been elaborated upon in the section above. However, it is useful to also provide a closer linkage between each of
these four value drivers and how they are individually and specifically expressed in each of the firms used in the study. The table below (Table 8.1) summarises the value creation sources of the eight case study firms illustrating how innovation, attraction/engagement, size/scale and efficiency are evident in each one of the firms.

**TABLE 8.1**

<table>
<thead>
<tr>
<th>Value source elements for crowdsourcing firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm A</td>
</tr>
<tr>
<td>Innovation</td>
</tr>
<tr>
<td>Attraction/Engagement</td>
</tr>
<tr>
<td>Size/Scale</td>
</tr>
<tr>
<td>Efficiency</td>
</tr>
<tr>
<td>Firm B</td>
</tr>
<tr>
<td>Innovation</td>
</tr>
<tr>
<td>Attraction/Engagement</td>
</tr>
<tr>
<td>Size/Scale</td>
</tr>
<tr>
<td>Efficiency</td>
</tr>
<tr>
<td>Firm C</td>
</tr>
<tr>
<td>Innovation</td>
</tr>
<tr>
<td>Attraction/Engagement</td>
</tr>
<tr>
<td>Size/Scale</td>
</tr>
<tr>
<td>Efficiency</td>
</tr>
<tr>
<td>Firm D</td>
</tr>
<tr>
<td>Innovation</td>
</tr>
<tr>
<td>Attraction/Engagement</td>
</tr>
<tr>
<td>Size/Scale</td>
</tr>
<tr>
<td>Efficiency</td>
</tr>
<tr>
<td>Firm E</td>
</tr>
<tr>
<td>Innovation</td>
</tr>
<tr>
<td>Attraction/Engagement</td>
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</tbody>
</table>
members have established sub-contracted businesses on the firm’s site. Many crowd members in
developing countries benefit from currency exchange differentials based on the client’s developed
country location.

<table>
<thead>
<tr>
<th>Size/Scale</th>
<th>The firm has a 7.3 million strong crowd with 300 FTE staff. It claims to operate in most countries in the world. It can produce an active interface between the crowd and a client within 10 seconds.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>Search costs are reduced by the rapid-fire cloud-based presence of literally millions of crowd members waiting to bid against each other when clients enter work projects online. Due to the enormous crowd size, crowd contributors typically bid for crowd work within seconds of clients posting work jobs. Bargaining costs are reduced via crowd members competing against each other to bid for client’s work which works to drive the cost to the client lower with minimal bargaining effort required of the client. Clients are largely self-managing. All three parties, firm, crowd and client interact in a significant manner in the work production system.</td>
</tr>
</tbody>
</table>

**Firm F** Value source elements

**Innovation** The firm provides a collective intelligence crowdsourcing mechanism to harness the collective intelligence of gifted data scientists and genius level crowd contributors. The firm has fostered the solving of difficult decades-old industry problems within weeks for relatively modest cost outlays.

**Attraction/Engagement** The firm sees itself as a community for elite crowd members gifted in data analysis to learn from each other and network and form teams in some cases. The firm has made efforts to embed itself inside universities. The firm ‘gives back’ by offering learning enrichment services for schools and universities. The firm claims that many employers are now requesting candidates to present evidence they have participated in Firm F crowdsourcing contests on application for new positions in industry new job positions/ internships.

<table>
<thead>
<tr>
<th>Size/Scale</th>
<th>The firm has an elite crowd of 100,000 gifted data analysts and high level of PhD members. It runs crowdsourcing competitions to solve scientific data problems and boasts a crowd in 100 countries and 200 universities and includes many thousands of PhD crowd members.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>The technological governance mechanisms set up by the firm ensure that crowd members are aware in real time within seconds of submitting contest offering how they rank in relation to other contestants. This real-time feedback helps to push contestants harder to out-perform competitors. The firm has presented evidence that its crowdsourcing contests undertaken by its ‘genius’ crowd competing against each other have solved real-world, longstanding data problems within weeks for a relatively modest cost outlay to clients. This one-stop-shop, defined timeline contest mechanism helps reduce search and information costs for clients.</td>
</tr>
</tbody>
</table>

**Firm G** Value source elements

**Innovation** The firm won major industry award of “Most Innovative Small Company in America”. The firm admit to revolutionising and disrupting retail clothing industry by combining designers, production line decision-making and consumers into specialised crowds. The firm has one of the biggest fashion brand followings on Facebook in the world and uses this presence to convert crowd offerings to sales. The crowd function as production contributors, production modifiers and managers as well as end-product consumers. All parties (crowd, firm and client-crowd) are an essential element of the firm and combine in a significant manner to provide output and generate sales in the firm’s crowdsourcing system.

**Attraction/Engagement** The firm has three distinct crowds which intermingle. The firm views its crowd as organic and delicate. The firm resists aggressive selling to its crowd. The firm deliberately maintains fun and friendly relationships with its various producer/consumer crowds. The firm sees itself as a place of entertainment for its crowd to ‘hang out’. Staff members employed by the firm have extensive profile pages and internal social firm activities, such as when a visiting band plays for staff, are broadcast online and available for crowd download.

<table>
<thead>
<tr>
<th>Size/Scale</th>
<th>The firm has a crowd of 2.5 million with 106 FTE staff. The firm has always sold out every item of every production line it has ever put up for sale since it started operating in 2000. It is the second biggest fashion brand on Facebook in terms of fans following it.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>Search costs and information asymmetry are both greatly reduced through the mechanism of the (consumer) crowd choosing what it wants to purchase at the pre-production phase when the (design) crowd is submitting potential fashion designs for consideration. Consumers and production design artists mingle at the start of the production process rather than the traditional end-stage of when the products are released (where there is no chance of feedback to the artists or buy-in from consumers). The firm and crowd work to a system which sees a co-mingling at both ends and in the middle of the production cycle.</td>
</tr>
</tbody>
</table>

**Firm P** Value source elements

**Innovation** The firm admit that where its industry is going one way, it will always go the other way. The firm ran the first crowdsourcing campaign of its type in its industry in a major project to develop a new product, launch it and sell it. The crowdsourcing campaign was the third most successful campaign of its type in 2012 in Australia when it launched and cost around one eighth of its biggest rivals’ respective campaigns.

**Attraction/Engagement** The firm attracted and curated crowd participants and engaged them through chiefly means of highlighting fun participation which added value to its crowd via offering fun experiences, being part of a product development crowd and participating in the new product launch. Small rewards of the new product were offered to some crowd members. One crowd participant was rewarded with a giant brass statue of himself, which symbolised the firm’s appreciation to its all of its crowd in general.

| Size/Scale | The firm had more than 6,000 total crowd participants in its campaign and collected 100,000 data points from this crowd which fed into its business intelligence systems to assist with new product development. |
8.5 RQ 1 - Crowdsourcing: How is it practised and conceptually characterised in terms of essential features in crowdsourcing-centric firms?

To this point, findings related more directly to RQ2 (value creation elements) were examined in depth. This latter section will investigate and report on the findings specifically related to RQ 1 in terms of crowdsourcing practices and conceptual characterisation.

The prequel phase of this study (Chapter 3) which sourced crowdsourcing-focussed scholarly literature, public trend data and publicly-sourced data from self-styled experts on crowdsourcing suggested that crowdsourcing was a new Web 2.0 based business model, a new resource, a method for collecting group wisdom and a phenomenon characterised as being co-beneficial, of commercial value, low cost, using a large crowd and employing an open call.

This initial prequel finding was largely confirmed by the grounded interview data. Web 2.0 was an exception by being not mentioned in interview data, although, it is clear that all crowdsourcing firms were operating de facto in a Web 2.0 environment and that the Internet was being used by crowdsourcing firms in an extensive and sophisticated manner.

As for being named a business model, four of the eight firms, namely Firms B, C, F and G, specified that their firms used crowdsourcing as a ‘business model’. As for group wisdom or collective intelligence, Firms B and D specifically mentioned harnessing collective intelligence and Firm F provided multiple examples of where collective intelligence had been manifestly harvested. The other characteristics highlighted in the prequel phase, such as crowdsourcing being a resource (all firms), co-beneficial (Firms B, C, F, G, P), commercially valuable (all firms), low-cost (Firms A, C, D, P) and using a large crowd (Firms A, C, G) were all characteristics mentioned
throughout the interview data. No firm mentioned the term ‘open call’ specifically, however it is clear that each firm’s method of drawing in their large crowd participation is based on a *de facto* ‘open call’, centred on each firm’s website and manner of presenting work tasks.

Having confirmed most of the key attributes of crowdsourcing that were uncovered at the prequel phase, the study now moves to more deeply examine the *in vivo* interview grounded data, along with secondary data to examine the exact nature of what crowdsourcing is.

So as to illustrate an initially broad view of the phenomenon of crowdsourcing, the use of five common query markers was employed. These query markers were: what, how, where, when and who. These help delineate what crowdsourcing actually is, how and indeed where it works, of when it works and examines who it involves. The data specifically used for this table was sourced from the grounded interview data from the previous chapter and website entries from the firms along with public press reports. Table 8.2 below highlights some of the important conceptual elements associated with the crowdsourcing phenomenon against these common query markers.
<table>
<thead>
<tr>
<th>What it is?</th>
<th>How it works?</th>
<th>Where it works?</th>
<th>When it works?</th>
<th>Who it involves?</th>
</tr>
</thead>
<tbody>
<tr>
<td>New, novel (firms A, B, E, F, G &amp; P)</td>
<td>Meritorious – the quality of end product is key (firms A, C &amp; F)</td>
<td>Globally – almost all countries are represented by the crowd (firms A, D, E, F &amp; G)</td>
<td>Always on, follow-the-sun, 24/7 timeframe (all 8 firms)</td>
<td>Firm, crowd, client are all critical elements (all 8 firms)</td>
</tr>
<tr>
<td>Unique, trailblazing (firms A, B, C, D, E &amp; G)</td>
<td>Competition-focussed (firms A, D, E, F &amp; G)</td>
<td>Where flexibility is valued (all 8 firm’s crowds)</td>
<td>Mutual benefits are apparent &amp; attainable (all 8 firms)</td>
<td>Developed/Developing world (firms A, B, C, D, E, F &amp; G)</td>
</tr>
<tr>
<td>Disruptive (all 8 firms)</td>
<td>Co-operation-focussed (firms B, C &amp; P)</td>
<td>Online across ubiquitous Web 2.0 networks (all 8 firms)</td>
<td>Firm, crowd &amp; client interact in a systemic manner (all 8 firms)</td>
<td>Trailblazing, innovative firms (firms A, B, C, D, E &amp; G)</td>
</tr>
<tr>
<td>Innovative (firms A, B, C, E, F, G &amp; P)</td>
<td>Relationship-focussed (firms A, B, C &amp; G)</td>
<td>Generally English-literate participants are required (all 8 firms)</td>
<td>Firm, crowd and client interact in a relational manner breeding trust (firms A, B, C, F &amp; G)</td>
<td>Participative, task-centric, engaged crowds (all 8 firms)</td>
</tr>
<tr>
<td>New way of doing business (firms A, B, C, D, E &amp; G)</td>
<td>Task-centric (all 8 firms)</td>
<td>Mostly in services (firms B, C, D, E, F, &amp; P), although occasionally in production (firms A, G)</td>
<td>Task is clear (all 8 firms)</td>
<td>Underground, edgy, engaged, participative clients (firms A, D &amp; G)</td>
</tr>
<tr>
<td>New source of labour (firms B, C, D, E, F, G)</td>
<td>Firm/Crowd/Client system (all firms)</td>
<td></td>
<td>Crowds are ‘large’ (firms A, B, C, D, E, F &amp; G)</td>
<td></td>
</tr>
<tr>
<td>A combination of elements of offshoring, outsourcing, contracting, co-creation &amp; user innovation (firms C, D, &amp; E)</td>
<td>Efficient scale management (all firms)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A system where a firm’s crowd can be producer &amp; consumer (firm B, G)</td>
<td>Efficient crowd management (all firms)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A client/employee engagement model (firms B &amp; P)</td>
<td>Efficient task flow management (all firms)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A new method for clients to get results cheaper, faster, better. (firm A, C, D)</td>
<td>Efficient end-product oversupply (waste) management (all firms)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A new method for crowd members to find work and seek payment. (crowds from firms A, C, D, E &amp; G)</td>
<td>Some level of crowd curation is necessary in most cases (firms A, B, C, F &amp; G)</td>
<td></td>
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</tbody>
</table>
In terms of what crowdsourcing is, it is characterised by being new, innovative, disruptive and an efficient way of engaging clients and employee, as well as a new work source for crowd members. In terms of how it works, it is merit and relationship focussed (crowds are often ‘curated’) and both competition and co-operation focussed allowing efficient task/production flow and efficient crowd over-supply systems to operate. In terms of where crowdsourcing works, it is almost exclusively an online, global phenomenon. The physical location of either crowd or client is, in most cases, immaterial to the crowd production or to the client requests. However, an exception to this notion of anywhere/anytime locational agnosticism is Firm D. They allow their mostly USA-based clients the ability to restrict a crowd to one that is based in the USA if the clients so wish. In the majority of cases, clients are based in developed countries. This translates to the fact that much crowdsourcing requires a crowd which is at least functionally English literate. Many crowdsourcing sites which require creative output, images, pictures and artistic designs may present an exception to the English literacy norm, however, crowd members in these instances still need to negotiate the English-centric firm website and potentially be able to answer queries in English for English-speaking developed country clients.

Crowdsourcing works is largely focused on the always-on flexibility of an open call, encompassing 24 hour a day, seven days a week timeframes over ubiquitous global networks. Crowdsourcing works best when the task is well-defined, when crowds are large enough to allow a broad diversity of output and when mutual benefits flow. Crowdsourcing works well when mutual trust is established among the key stakeholders. The CCO of Firm G goes so far as to say of crowdsourcing firms and their relationship to their stakeholders: “it’s kind of an organic being, like you have to be very delicate with it… people will start to feel, like ‘oh ok this is really what this is about, they are always marketing to us’”. The view of the CCO is that many other businesses using crowdsourcing fail initially because they do not recognise the delicate, organic nature of the crowd and are very obviously output/profit/money focussed (‘selly’ as he puts it) and crowds are repelled by such a focus.
The ‘who’ in relation to the phenomenon of crowdsourcing is the symbiosis of the trilogy of firm, crowd and client. All three of these parties are necessary for proper functioning of crowdsourcing in crowdsourcing firms. All three stakeholders can be characterised as engaged, participative and ‘edgy’.

Building on from the initial common query markers to help delineate some of the finer points of what crowdsourcing is, data was sourced again from the thematic coding analysis of the data in the previous initial findings chapter. From the thematic coding analysis, the first of the aggregate dimensions runs thus: ‘crowdsourcing businesses based entirely upon crowdsourcing are new, unique and disruptive’. Using this grounded premise and teamed with data from the interviews, company websites and site visits, a schema for the birth of a crowdsourcing firm has been constructed. Figure 8.4 below seeks to illustrate that crowdsourcing-born firms are indeed new, unique and disruptive types of businesses.
One salient point to make is that crowdsourcing-born firms in the study were either born with crowds (Firms A, B, C, D & E) having preceded the firm or alternatively have initiated the business and quickly formed crowds (F, G & P). Amazingly one of the firms, Firm A, who initially observed the unprompted and organic crowd formation and client/crowd business interaction on their website were so wary of it that they indicated that their initial thoughts were to ‘kill it’ because they saw it as wasting bandwidth and
therefore had to bear a cost burden. To their credit, Firm A quickly realised the potential of this unusual occurrence and formed a business around it. Firm G also formed a somewhat ‘folksy’ crowd showcase website and commenced selling items showcased by the crowd to friends and family initially. Slowly over time Firm G realised the potential of the crowd and as it increased, formed a system around it while still being careful to honour the original organic, folksy feel of the root business. Interestingly two of the firms in the study, Firms A and G, used the word ‘organic’ to describe the crowd formation process.

8.6 Crowdsourcing in firms: How does it function in practice?

Building on from what crowdsourcing is, based on the grounded data, the findings move to delineate how crowdsourcing functions and is practiced in crowdsourcing firms.

8.6.1 Crowdsourcing involves all three key stakeholders of firm, crowd and client

The essential functioning of the phenomenon of crowdsourcing would characteristically involve all three parties in its process, that is, the crowdsourcing firm, its clients and its crowd (all eight firms). Crowdsourcing, as it is practised by crowdsourcing firms, involves a system which ties in all three parties to its proper functioning. The system established by crowdsourcing firms works to tie in crowds and clients in a non-traditional manner. At times the crowd, and even the client, can be involved in multiple stages across the functioning of a single crowdsourcing action. In addition the firm oftentimes relies on the crowd for what would be considered key firm capabilities, such as product development, decision-making, marketing and/or public relations (Firms B & G). Due to the sheer crowd numbers, crowdsourcing firms (Firms A, C, D, E & G) oftentimes rely on clients to self-serve, devise the crowdsourcing task and sometimes to choose the winning result and pay the successful crowd member(s) (Firm A, E & G). The value derived from such a participatory system includes increasing crowd size attraction benefits for the firms, trust-enhanced crowds and clients who are engaged and participation-oriented.

Below Figure 8.5 provides an illustrative summary of how crowdsourcing firms operate.
In terms of the illustrative summary of how crowdsourcing works in Figure 8.5, it is interesting to note that many crowdsourcing systems are structured so the vast majority of crowd output end-product receives no payment (Firms A, B, E, F, G & P). Surprisingly, in spite of this, crowds being attracted to crowdsourcing firms continue to grow exponentially. For example, at the commencement of the study in 2011, Firm E had attracted a crowd of 7.3 million and now in 2015 attracts over 15.4 million.

Another feature of the illustrative summary is the efficient management by the crowdsourcing firm of the (huge) exponentially accumulated crowd output. Given that some crowdsourcing firms, such as Firms A and G, receive hundreds or even thousands of individual crowd output end-products every day, each firm has established highly effective and efficient systems to process that which cannot or will not be required by the firm or the client. Firm G has the crowd (without any payment) providing the culling of its exponentially accumulated crowd output. This is remarkable in that each week the crowd, without payment, provides work to reduce approximately 300 items of crowd output down to 10 items. Without such hugely efficient and cost effective systems in place, the crowdsourcing model adopted by Firm G would be non-viable.
from a financial cost output perspective to operate due to prohibitive labour cost outlays.

A third feature of the illustrative summary is the efficiency of the voting or judging systems which crowdsourcing firms utilise. Some of the firms even employ completely technological systems which are highly automated. For example, the Firm F scientist I interviewed indicated that once each crowdsourcing competition was initiated the whole process was fully automated by online technology. The final result by the ultimate winning crowd individual (or team), is judged by a fully objective, fully technical process – with no human mediation. Even during the period of running, all competitive entrants in crowdsourcing contests held by Firm F, when they input submissions, know almost instantaneously how successfully (or not) they are faring against all other competitors in that same competition. The CEO noted that such a high level of objective judgement of results by a ‘faceless’ non-human technological regulator reduced crowd-related ill-feeling on the part of those who were not ultimately successful. Another Firm F informant indicated that such judgement processes used to cull the successful from the unsuccessful crowd members helped to create a fairly water-tight case for its crowdsourcing system being a true meritocracy. Even the polar case firm, Firm P, generated 100,000 data points from its crowd through technology which mediated and interpreted data from en masse real-time crowd informant mobile phone data actively inputted by crowd members.

8.6.2 Crowdsourcing functions in practice as a continuous, always-on, global open call

The phenomenon of crowdsourcing functions as an ‘always-on’, continuous and global open call to anyone willing to participate. This was observable in all eight firms in the study. The open call may encompass a nature of work or task that may be restrictive to the provision of ‘anyone willing to participate’ in that the crowd may have to pre-qualify in some way or may be required to have some skill levels in design or a mathematical ability or a creative bent for example. But generally the crowdsourcing firms are not in the business of restricting crowd participation – so anyone willing to participate is generally a key functional aspect of crowdsourcing as it operates in crowdsourcing firms. This is even true of firms which claim to attract crowds with superior intelligence levels such as Firm F. The CEO and the Chairman of Firm F took
pains to point out that at times the competition winner is an ordinary citizen without special qualifications like a PhD in advanced science or more generalist qualifications not pertaining to a specialty in advanced data analysis. For example the firm has two examples of one instance where the winner was an English major and had never worked formally in a data science vocation. The second example was that one winner (of a particularly challenging and prestigious crowdsourcing data analysis competition) had no formal qualifications at all and was a middle-aged small business owner in a rural state in the USA. Such examples also speak of crowdsourcing as a delivery method of talent in unusual or unexpected places.

8.6.3 Crowdsourcing is practised so that ‘anyone, anywhere, anytime’ crowds create value

Crowdsourcing is practised and functions so that crowds of ‘anyone from anywhere’, at any time are able to ultimately create value for all three parties: firm, client and crowd. This fact was observable in all eight firms in the study. The firm easily avails itself of the work output of thousands of individuals without restrictive individual work contracts and large employment on-costs. This is in concert with firms having to outlay modest payment or oftentimes no payment for crowd output. A salient example of this is given by the VP, Business Development from Firm C who says:

I go and talk to customers and they want to reduce costs and their business workloads and we tend to focus on core business workloads so the example would be they might have a process in place where they have an in-house team of 13 people doing something, and they are doing it fairly well but there’s no way they can grow that to 50 people and still be cost effective, so we came in to work with them and show them how to map that process to crowdsourcing and how they can insert our combination of technology, workforce and data analytics into that workflow and scale at a much more cost effective rate and most of the time we are more efficient just because of the way we parallel process the work, so specifically in the last four hours of a day we run tests and we’re about 40% more efficient than your average data entry worker that’s just sitting in the office entering data for eight hours a day.

In a similar vein, the founder of Firm E says:

it (crowdsourcing) allows things to get things done easily, cost efficiently, in a way that’s highly interactive, how they can provide a lot of feedback to people, more easily than the traditional method of hiring someone out of the Yellow Pages, go meet with them and you know hope in two weeks from now that they actually got what you intended in your brief to be reflected, and it’s ultimately
cost-effective, right, the old model was you hired a designer for you know thousands of dollars and you get maybe six designs to choose from, you know, the new model is you post a contest for a few hundred dollars and you get - I’ve seen contests with over a thousand designs for a few hundred dollars. So I mean it’s a fantastic way in which you can actually you know, hire and interact quickly and kind of get what you want from the crowd.

As the example above highlights, the client receives the result of sometimes thousands of person hours of work for a modest outlay. Clients may also benefit from the artefact of collective intelligence, which is particularly true of Firm F, which relies on highly intelligent data scientists competing in real-time to solve some highly challenging real-world data problems.

The client can oftentimes develop a relationship with successful crowd individuals which may result in an ongoing working relationship. In this case crowdsourcing can operate as a new recruitment method based on actual output/results for any client’s future work undertakings. Crowds associated with Firms A, E, F and G commented on the fact that client-building had featured in their foray into crowdsourcing.

The crowd can derive value through the fact that crowdsourcing is low on traditional employment restrictions for example traditionally work (before ubiquitous Internet networks) would be generally characterised by being inflexible by location. However, now a crowd member in India does not need to re-locate to complete work originating in the USA. Crowds in Firms A, C, D, E and G had reaped benefit from this feature. For the crowd the benefit of crowdsourcing also includes that the work is generally flexible, global, on-line, merit-oriented and openly participatory-focussed.

8.6.4 Crowdsourcing is practised by firms adopting a middle-broker approach between crowd and client

The phenomenon of crowdsourcing, as it applies to crowdsourcing firms would usually include a client in conjunction with the firm and the crowd. Many crowdsourcing firms function simply as a mediation or middle-broker between client (work request) and crowd (output). All firms in the study functioned in this manner. Some firms allow the client to see all of the crowd’s output unedited, such as Firms A, E and G. Other crowdsourcing firms use crowd output culling methods prior to client delivery, such as Firms B, C, D, F and P. These culling methods include technology, other crowd members, internal firm panels in conjunction with other crowd members
and regular technologically-driven crowd competency tests. The client can derive value through the crowdsourcing phenomenon via its ubiquitous always-on quality, in addition to fast, cheap and choice-prolific crowd outputs. Crowdsourcing also offers clients a chance to participate (or not) in the process while at the same time offering them access to unprecedented scaling of human capital (Firms A, D, E and G). The client can take advantage of a concentrated dose of ‘people power’ on its work tasks and maybe avail itself of collective intelligence (Firms F and G). Even firm P, the ‘polar’ case firm (which is not a crowdsourcing-centric firm but simply a firm using crowdsourcing in a major project), collected 100,000 individual data points through its crowdsourcing project, which was proprietary intelligence used to develop a major new product.

8.6.5 Crowdsourcing firms are pioneering and clients are underground and edgy

Echoing some of the self-perception of firms founders that they are pioneers (Firms A, B, C, D, E, G and P), firms attribute some of this edginess to their clients as well. Crowdsourcing as a new phenomenon appears to assist in the characterisation of self-selected crowdsourcing clients as ‘underground’ and ‘edgy’ (Firm D mentioned this specifically). They are also willing to largely self-serve via the mediated crowdsourcing process. Such clients are also characterised as largely engaged and willing to actively participate in the crowdsourcing process, even oftentimes forming direct business relationships with individual (successful) crowd members.

8.6.6 Crowdsourcing is practised by firms effectively using large self-selected crowds

As obvious as it sounds, the phenomenon of crowdsourcing requires a crowd. Clearly, it cannot properly function with only the firm and client. As part of the phenomenon of crowdsourcing in crowdsourcing firms the crowd itself is characterised as ubiquitous, large in number, available, free-wheeling, organic, self-selected and open to trusting the firm and business relationship-oriented. The benefits derived by the crowd include a potential income with side benefits such as virtual payment options (Firms B & D) or currency conversion benefits (Firms A, D, E & G).

8.6.7 Crowdsourcing is practised as a new type of employment avenue

Crowdsourcing has been characterised by the crowd as being a beneficial employment avenue which is characterised by lower traditional employment restrictions and functions as a meritocracy so it is available for all participants whether from a
developed or developing country, whether formally qualified or not and/or whether the individual crowd member is young or old or male or female (Firms A, C & F). It is also a potential career avenue or alternative employment source or additional income-generator for those already employed (it has been used - presumably surreptitiously - during ‘down times’ at a traditional workplace by one crowd informant to earn extra money) or another client-generating source (Firms A, C, D, E & G). Typical of this approach is crowd member L.C. (Firm E) who says:

We have – actually we do have a lot of sort of down time at work, so sometimes I’m like able, not sometimes, a lot of times I am able to just pull out my own laptop and check on what I need to do on (Firm E’s generated work) and do some extra things while I am waiting for like some of the other tasks that I need to do in my regular job, so at my regular job it does take a lot of time but during the time that I am in the office there are a lot of opportunities for me to do extra things, so that’s when I try to fit them in and not only that, and of course when I’m at home I try to spend like an extra two or three hours to do what I need to do on (Firm E’s work).

8.6.8 Crowdsourcing is practised as a benefit to crowd beyond simple monetary reward

Crowdsourcing is seen sometimes as a beneficial phenomenon which may encourage personal development, esteem-building, learning, training, team-building and leadership qualities (Firms A, C, F & G). Typical of this is the sentiment expressed by E. L. crowd member from firm F:

Then you go oh, you actually place really, really low, so you try, it pushes you to sort of think outside the box or find a better solution to improve yourself, but I suppose it’s that journey as well, where, even if you don’t win, but you have gained a lot of knowledge, and if you do win, you know, that’s a bonus, you win a prize and you learn a lot.

Crowdsourcing may offer benefits around helping to fill in time for some participants or be a source of philanthropic output (Firms C, D F & G). For example crowd members in Firm C spoke of doing monthly community service placements organised by Firm C to work in orphanages or other similar services and Firm B spoke of one crowdsourcing participant who happened to be at CEO level in a major firm who willingly helped write a pro bono business plan for a client with a brand they liked.
9. DISCUSSION

9.1 Introduction

The discussion chapter aims to link the findings of the study with the literature as established in the earlier literature review chapter. The discussion chapter will provide abstract and scholarly insights in relation to each research question. In addition it will provide theoretical analysis in terms of congruence (or not) with or indeed extension of existing theoretical frameworks relating to crowdsourcing practice, conceptual characterisation of essential features and value creation.

Gioia, et al. (2012) highlight the importance in exploratory qualitative research of creating theoretical concepts in preference to propositions. The view that qualitative researchers must fall into the well-established practice of creating propositions out of grounded findings maybe ought to receive less emphasis against simply creating grounded concepts as a bona fide nascent research step (Gioia et al., 2012). In keeping with this sentiment, I have uncovered the main elements relating to how crowdsourcing is conceptually characterised and practiced in crowdsourcing firms that were observable and reportable from the study.

This chapter is structured in terms of each of the two research questions and a discussion of how each research question is evaluated against relevant existing theoretical frameworks. The groundwork established in the literature review is used to help guide the discussion.

9.2 RQ1: How is crowdsourcing practised and conceptually characterised in terms of essential features in crowdsourcing-centric firms?

9.2.1 Crowdsourcing and its practice and conceptual characteristics in terms of essential features: Grounded concepts from the study

The literature review chapter uncovered some prima facie academic conceptions of crowdsourcing. These were that crowdsourcing can help to speed up a firm’s internal processes, lower operational costs, reduce time to market and potentially revolutionise a
firm’s innovative landscape (Andriole, 2010; Sloane, 2011). The literature review in addition, helped delineate the concept of crowdsourcing as multi-faceted. Howe (2008, p.280), who is the widely-attributed originator of the modern neologism of ‘crowdsourcing’, sees it in these terms: “crowdsourcing isn’t a single strategy. It’s an umbrella term for a highly varied group of approaches that share one obvious attribute in common: they all depend on some contribution from the crowd”.

The aggregate dimensions emanating from the data in the findings section of the study (see Figure 8.1) has helped to sculpt and delineate crowdsourcing as a new, positive force which fosters global productivity by tapping into a collective, dynamic crowd. It speaks very much in concurrence to Howe’s (2008) notion that it is not a single strategy and can be divided into layers of characteristics, functioning and value drivers to help delineate a conception of definitions and practises. It is also confirmatory of the notion that crowdsourcing lowers costs, speeds up processes and reduces time to market (Andriole, 2010; Sloane, 2011). This is neatly exemplified by the words of one CFO (Firm D) who states in relation to crowdsourcing: “It’s better, it’s faster and it’s cheaper”.

Crowdsourcing, as conceptually characterised and practised in crowdsourcing firms, encompasses three main concepts including: firstly, essential characteristics (what it is); secondly, essential functioning (how it works); and thirdly, essential value drivers whereby stakeholders create and receive value.

In terms of the first concept, essential characteristics, the findings illustrate that crowdsourcing is new, unique, disruptive, innovative and novel, and crowdsourcing firms make the majority of their revenue from it.

In terms of the second concept, essential functioning, the findings elucidate that crowdsourcing is participatory, engaging and self-selection oriented. In addition crowdsourcing functions by having an ‘anyone, anywhere, anytime’ ubiquity. It functions so as to be practised globally in almost all countries and involves very large crowds participating - usually in excess of 100,000 in size. In addition it operates on a basis of either competition or mass collaboration. Finally it must function to involve the stakeholders of firm, crowd, client (sometimes the client is the crowd also).
In terms of the third concept, essential value drivers, the findings reveal that crowdsourcing stakeholders both create and receive value through mutual and tangible benefits.

Howe’s (2006b) well-known definition of crowdsourcing runs that it is “the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call”. Central to Howe’s foundational statement on crowdsourcing is the significance of the ‘company or institution’ in the ‘doing’ of crowdsourcing. The study places high significance on the firm as the doer, the organiser, the manager of crowdsourcing. In the study, all crowdsourcing firms - in relation to their central role as crowdsourcing agents - are conceived thus: they are expert crowd engagers/managers, who self-characterise as innovators and trailblazers and thereby build competitive advantage through building innovative businesses. They work hard to build trust and to build truly global businesses that operate in most countries. Crowdsourcing firms curate crowds (and clients) thereby attracting positive affect from crowds (and clients). The crowdsourcing firms comprise and value technical experts, who elicit much productivity and eliminate wastage for low outlay costs, while efficiently solving client’s problems and addressing client’s needs. These firms not only build but, perhaps more importantly, keep online communities. In the same vein they build a new industry while disrupting existing industries.

In terms of Howe’s (2008, p. 280) more recent view that focuses more sharply on the total dependence of crowdsourcing on its “contribution of a crowd”, the crowd is conceived thus: they are drawn from both developed and developing countries and they experience both advantages and disadvantages from crowdsourcing work. Many crowd members are paid nothing, some are paid modestly and a small number are paid huge sums. The crowd benefits from elements other than money such as peer/social recognition, self-esteem building, skill development, client-building, fun, time-filling and philanthropy. A final conception of the crowd is that crowd members, in spite of their en masse large numbers, individually may express a surprising level of trust and affect toward their crowdsourcing firms.
All the above conceptions illustrated in the findings combine to provide a portrayal and a delineation of how crowdsourcing is conceptually characterised inside crowdsourcing firms and thereby highlight the essential characteristics. The conceptual characteristic view of what crowdsourcing is also sits alongside a view of its actual descriptive definition. Such definitional view, in light of the study is also examined below.

### 9.2.2 Conceptual characteristics and practice: Definitional perspective and disentangling from related concepts

As outlined in the literature review chapter, the most comprehensive scholarly conceptual definition of crowdsourcing was attempted by Estelles-Arolas & Gonzalez-Ladron De-Guevara in 2012. Their results were based on the use of six databases including ACM, IEEE, ScienceDirect, SAGE, SpringerLink, and Emerald using search criteria with “crowdsourcing” as a keyword and they found 209 documents with 40 original definitions of crowdsourcing from 32 distinct articles. The final definition based on their analysis and the addition of previously created definitional elements was the following:

*Crowdsourcing is a type of participative online activity in which an individual, an institution, a non-profit organization, or company proposes to a group of individuals of varying knowledge, heterogeneity, and number, via a flexible open call, the voluntary undertaking of a task. The undertaking of the task, of variable complexity and modularity, and in which the crowd should participate bringing their work, money, knowledge and/or experience, always entails mutual benefit. The user will receive the satisfaction of a given type of need, be it economic, social recognition, self-esteem, or the development of individual skills, while the crowdsourcer will obtain and utilize to their advantage what the user has brought to the venture, whose form will depend on the type of activity undertaken (pp. 9-10).*

The results of the study show high levels of congruence with the above scholarly conceptual definition. The study highlighted that crowdsourcing is indeed a participative online activity involving a party (a firm in the case of the study) placing open calls aimed at knowledge-diverse, heterogeneous and populous-divergent crowds. Tasks in the study were all voluntarily undertaken by crowd members and in keeping with the above definition, tasks were indeed of variable complexity/modularity
contingent upon each crowdsourcing firm’s operations. Mutual benefit was a concept that resonated in the study. Individual crowd members in the study did indeed receive benefits including economic, social recognition, self-esteem and skill development (among others). The crowdsourcing firms in the study, as in the definition, also reaped advantage from the whole process.

The elements of the above definition which are less congruent with the study include that the crowd number should be delineated more stridently as ‘large’ or a similar descriptor. The study also brought out that many of the crowdsourcing firms operate literally globally in almost every country and crowds likewise are also from almost every country. The above definition might have included the word ‘global’ or provided some indication it is practised in most countries. Another variation on the Estelles-Arolas & Gonzalez-Ladron De-Guevara (2012) definition in the study is that the study found no instances where crowd members brought ‘money’, as in paid money to the crowdsourcing firm. Such instances of crowd members providing money speak more closely of crowdfunding rather than crowdsourcing.

In addition, because the established definition was trying to account for every type of crowdsourcing agent the ‘advantage’ that is obtained or utilised by the crowdsourcing agent is somewhat vague and ill-defined in the above definition, running thus: “…while the crowdsourcer will obtain and utilize to their advantage that what the user has brought to the venture, whose form will depend on the type of activity undertaken” (Estelles-Arolas & Gonzalez-Ladron De-Guevara, 2012, p. 10). This part of the definition could be altered by the findings of the study - which only had firms as the crowdsourcing agent. On the point of the advantage wrought by crowdsourcing to the crowdsourcing agent or firm, the last part of the definition (as informed by this study’s findings) could then run (italics denote my prescribed additions to the established definition):

*while the crowdsourcer (firm) will obtain and utilize to their advantage the final iteration of the combined crowd productive output combining elements gained from the crowd of their knowledge, skills, creativity, diversity, global reach, large size, scale, good-will, trust and output timeliness and efficiency. ”*

In fact, the scholarly definition established by Estelles-Arolas and Gonzalez-Ladron De-Guevara in 2012 may be somewhat streamlined and improved by elements of this
study’s findings. A new suggested definition of crowdsourcing - taking advantage of the empirical findings – might run thus:

Crowdsourcing occurs where a global, on-line open call is promulgated by an issuer to a large crowd to undertake a task or tasks mutually beneficial to all parties. The issuer may contribute financing, reward, feedback and/or appreciation and the crowd may contribute work, money, knowledge and/or experience to the task. The crowd may receive monetary reward and/or develop knowledge, skills, enhanced reputation, teamwork, creativity, community belonging and/or philanthropy. The issuer may benefit from diversity, global reach, creativity, broad skill pool, scale, lower costs, output timeliness, crowd curation and efficiency.

9.2.3 Conceptual characteristics and practice: Insights against established frameworks of open innovation and open source

As mentioned in the literature review, Schenk and Guittard (2009) place crowdsourcing practice wholly as a subset of outsourcing and have it intersecting with open innovation and open source. By so doing, Schenk and Guittard (2009) have made early efforts to try to position crowdsourcing in a structural framework.

In terms of crowdsourcing intersecting with open innovation, Chesbourgh’s (2011) view that crowdsourcing is simply a type of open innovation is too limited based on the study’s findings. The concepts delineated below highlight that crowdsourcing is used by firms not simply to source innovation outside the firms’ boundaries as Chesbrough’s (2003) framework of open innovation would prescribe. Although, some commentators such as Hopkins (2011) have tried to extend open innovation to cover how innovations can be used to innovate processes instead of just outsourcing ideas. However, crowdsourcing does not only outsource ideas or innovate processes, it provides a new system of interacting for all stakeholders in the process and is much more nuanced than a simple innovation of a single process or function.

In addition, crowdsourcing-centric firms derive the majority of their revenue from crowdsourcing, so it is being used by such firms in the study existentially - as a critical element of the firm. It is not being used one-dimensionally to simply seek innovation from outside the firm or innovate on a single process such as finance or marketing.
In much the same way it is beyond the bounds of open innovation, crowdsourcing is also a much more developed process than simple open source, which is primarily associated with and generally limited to open software coding.

9.2.4 Conceptual characteristics and practice: Insights on how it is different to outsourcing

The literature review helped to signpost an initial view that crowdsourcing was related to outsourcing. Schenk and Guittard’s (2009) notion that the phenomenon of crowdsourcing sits entirely inside the super-structure of outsourcing does not do justice to crowdsourcing’s complexities against its conception and practice within crowdsourcing firms. Crowdsourcing may be used by crowdsourcing firms, for example, to yield collective intelligence for its clients through the operation of crowds collectively working en masse or in a competitive environment such as Firm F.

Outsourcing cannot do this. Crowdsourcing, in the case of Firm A for example, may yield scores or even hundreds of item choices for individual clients at very low cost within hours. Additionally, in the same vein, crowdsourcing firms such as Firm D claim to produce more than four human years of work output daily - all for a modest cost. Again, outsourcing firms cannot claim to do this.

Outsourcing is defined as sourcing activities externally via another firm’s employees that were previously performed in-house (Harland, Knight, Lamming & Walker, 2005; Lei & Hitt, 1995). A critical difference is that crowdsourcing is practised so that many of the crowdsourcing firm’s activities are sourced externally (as in outsourcing) but not through another firm’s employees. This dispenses with the disadvantage of crowdsourcing firms having to specify service level agreements with an outsourcing firm and with the need to identify and isolate core and non-core activities as is required for outsourcing (Harland et al., 2005). In addition Harland et al. (2005) provide evidence that outsourcing has the disadvantage of causing widespread downward pressure on countries’ domestic salaries, clashes of international cultures and/or inappropriate foreign control over national resources. There is no evidence that crowdsourcing has any of these disadvantages.

Weigelt and Sarkar (2012) present an empirical study concluding that outsourcing yields efficiency but hurts adaptability – the speed of a firm’s response to its customer’s
changing needs. The crowdsourcing firms in the study appear to be highly adaptable to their customer’s needs primarily through either involving their crowd as customers or through providing outstanding and unprecedented choice and timely crowd-size scaling to customers. Customers are also part of the adaptability inherent in the firm by being closely involved in some of the firm capabilities and decision-making stages. This was particularly true of Firms B and G in the study.

9.2.5 Conceptual characteristics and practice: Insights on how it is related to collective intelligence

The literature review highlighted the existence of a relationship between crowdsourcing and collective intelligence (Brabham, 2010; Milius (2009). The grounded data from both the executives and the crowd in the eight crowdsourcing firms provide some insight into collective intelligence. Whilst the term itself was not mentioned by any informant, this does not mean that the artefact of collective intelligence was missing. Firm F, for example, provided a number of real-life examples of its crowd providing ground-breaking results and solving previously decades-long unsolved problems chiefly through the operation of its leader-board. The presence of this innovative leader-board positions the tiered ranking of crowdsourcing contestants continuously in real time and so encourages what might be regarded as collective intelligence output sourced through hyper-competitive, already-high-IQ crowds (Firm F claims to have a crowd comprising more than 10,000 PhD level participants). Firm P also produced a highly popular and well-regarded new product through the sum total of data comprising 10,000 data points received through the collective input of its crowds.

9.2.6 Conceptual characteristics and practice: Insights regarding whether it is a new organisational form

As signalled in the literature review, Okhuysen et al. (2013) provide an insight that future theorising by scholars about work and workplaces should seek to broadly incorporate an understanding of how workplace practices operate for different groups and firms. Such understanding of how workplace practices operate cover off the notion of what type of form the organisation takes. Afuah and Tucci (2012, p.372) predict “new organizational forms to emerge that perform largely crowdsourcing activities”. While acknowledging Schenk and Guittard’s (2009) early efforts to retro-fit crowdsourcing to existing frameworks inside outsourcing and intersecting open
innovation and open source, this study moves crowdsourcing more toward Afuah and Tucci’s (2012) notion of a new type of organisational form. Schilling and Steensma (2001) point to very recent history as producing the development of newer non-hierarchival, permeable, interconnected and modular organisation forms. An organisational form is defined as the characteristics of an organisation which identify it as a distinct entity and simultaneously classify it as a member of similar organisations (Romanelli, 1991). In terms of this definition, crowdsourcing-centric firms while being grouped as entities which belong together as firms which crowdsource-for-a-living also have distinct characteristics which alienate them from other types of similar online, distributed organisations developed in recent history.

In addition to being considered a new organisational form, crowdsourcing may also be considered a new classification of work in a modern economic context (Cappelli & Keller, 2013). Work, workplaces and organisations are dynamic, ever-changing entities that may at times confound neat classification and at the same time challenge scholars to seek new understandings (Cappelli & Keller, 2013; Okhuysen et al., 2013). Child and McGrath (2001, p. 1,135) further highlight that there is a gap between “the rapid development of new organizational forms in practice and the capacity of existing perspectives to account for them in theory”. As Cappelli and Keller (2013, p. 575) state: “distinctions that appeared to make sense for classifying work in the past, such as how long a job lasts, no longer appear useful, hindering our ability to build knowledge about these new arrangements”. Crowdsourcing is one such entity that speaks to a new classification of workplace and work arrangement. Cappelli and Keller (2013) present a categorisation of work arrangements available now to organisations and crowd workers would very much operate in some of the newer realms they highlight such as contingent work, non-standard work and externalized work.

This new type of organisational form (Afuah & Tucci, 2012) and work classification (Cappelli & Keller, 2013) is captured in both the essential characteristics and functioning operational practices of the phenomenon of crowdsourcing simultaneously. The first aggregate dimension of the grounded findings in the data structure in the findings chapter found that business based on crowdsourcing reported that such businesses essential characteristics were new, unique and disruptive. In addition a
critical element of the functioning practice of crowdsourcing characteristically involves all three parties (firm, crowd and client) functioning in a non-traditional manner. For example, in the study, all eight firms practised a form of crowdsourcing which involved a system which tied in all three parties to its proper functioning. At times the crowd, and even the client, can be involved in multiple stages across the functioning of a single crowdsourcing action. In addition the firm at times must depend on the (ephemeral, fleeting and often unpaid) crowd for what would be considered key firm capabilities, including new product creation and launch, decision-making skills, distributed marketing and/or public relations.

Crowdsourcing is a novel organisational form in both what it is via its essential characteristics and a new type of work in how it operates through the dynamic structural relationships and interdependence of all three major stakeholders: firm, client and crowd; as well as the large size and ephemeral nature of the crowd providing seconds, minutes or hours of work often for no payment.

9.3 RQ 2 - How does crowdsourcing create value for the key participants in crowdsourcing transactions?

The results of the study present the value of crowdsourcing in terms of what it is, through its essential characteristic as an entity of innovation, as well as through its functioning operation of attraction/engagement, size and scale as well as efficiency. On an individual level the firm, crowd members and clients are value-targets and value-sources and combine to function as a symbiotic value creation system, where all three stakeholders are critical.

In the management and organisation literature, previous scholarly in-depth case studies on crowdsourcing have not featured crowdsourcing-centric firms whose very existence relies on crowdsourcing and whose major revenues are raised through crowdsourcing (Antikainen et al., 2010; Ordanini et al., 2011; Russo-Spena & Mele, 2012). The case studies presented in this study offer a unique and grounded view into the operations and value creation drivers inside crowdsourcing-centric firms.
9.3.1 Extending the frontiers of traditional value creation frameworks

The results of this study conceptualise how value is created within crowdsourcing-centric firms. The findings related to crowdsourcing firm characteristics, functioning and value drivers may be partially explained but not fully and completely explained by any individual framework belonging to the traditional strategic management literature frameworks. These traditional strategic management frames include Schumpeterian innovation, TCE, RBV and DCV frameworks.

As elucidated in the literature review, these traditional frameworks in the strategic management literature highlight that value can be created inside the firm via various means. For example, through Schumpeterian innovation as when firms develop or invent new ways of doing things using new methods, new technologies and thereby encompass innovation and invention activities (Amit and Zott, 2001; Schumpeter, 1943). Value can be created via transactional economic exchange efficiencies vital to the transaction cost economics (TCE) perspective (Williamson, 1985). In addition value via the firm can be created through the exploitation of specific valuable, rare, inimitable and non-substitutable (VRIN) firm resources (Barney, 1991) and the dynamic creation and re-configuration of internal capabilities (Teece & Pisano, 1994). Value may be captured by the use of resources with attributes that make them difficult to imitate and though methods of resource management or knowledge management (Felin & Hesterly, 2007; Lepak et al., 2007).

The fact that existing resource-focussed value creation theories struggle to explain the nature of crowdsourcing firms’ heterogeneity vested through the chief resource of the crowd is not able to be attributed simply to the fact that crowdsourcing is nascent – being barely a decade old in its current Internet-enabled form.

Crowdsourcing-centric firms are quite unique in usage of their main resource through chiefly operating on and relying on an ill-defined, anonymous, mostly unpaid and amorphous large crowd. That crowdsourcing firms could rely on such an unusual, seemingly impermanent and ill-defined resource as the crowd and then move to establish that same crowd as VRIN and thereby achieve firm heterogeneity and competitive advantage along with value creation is most certainly puzzling. In the same vein, that crowdsourcing firms could strategically reconfigure their capabilities
dynamically through an ongoing, and more startlingly, an existential reliance on attracting and exploiting the capabilities of large anonymous, transient crowds - sometimes in the millions – is also surprising. Equally, that crowdsourcing firms could even attempt to create any transactional efficiency with such an uncertain and ephemeral exchange partner as a large online crowd is likewise surprising.

While no single traditional strategic management framework was able to fully explain some of the elements of crowdsourcing’s value creation potential; all frameworks could offer partial explanations. In terms of how crowdsourcing is partly explained by each of these of these individual traditional value creation frameworks, an analysis was conducted linking how elements relating to crowdsourcing nature, practice and value potential were applicable to them. The analysis was further expanded by adding relevant elements of the grounded data’s three aggregate dimensions and the value model’s elements which were also applicable to each element.

However, there are elements of the value creation potential of crowdsourcing which confounds each of the traditional strategic management value creation frameworks, including TCE, Schumpeterian innovation, the creation of VRIN framed by the resource-based view and the re-configuration of internal capabilities framed by Dynamic Capabilities.

9.3.2 Value creation: TCE and crowdsourcing: How it fits

In terms of TCE theory, transactional efficiency is the main value source (Williamson, 1985). In crowdsourcing scenarios, each firm in the study proved to be a highly efficient mediator of demand and supply forces in its marketplace. In addition, all crowdsourcing firms in the study were transactionally efficient through a reduction in transactional costs and through governance, procedural and technical controls. For example, only the successful individual or team behind the crowd-supplied product or service would receive payment from the client via the firm. Most crowd production was therefore rejected and unsuccessful crowd members were not formally compensated through any payments. This is a significant variation on outsourcing where all labour providers are usually paid.

Such crowd production and concomitant exchange frequency in these instances was vast, for example Firm A received new production material from a crowd member every
five seconds and Firm C received over 300 crowd production material items per day. Such vast quantities of crowd produced items were controlled and governed by strict technology protocols and in most cases in crowdsourcing scenarios unwanted production over-supply (waste) was efficiently dispensed with by either the client or the crowd, not the firm. The transactional efficiency and associated cost reduction was therefore executed outside the firm in many cases.

Williamson’s (1991) view is that value is also created through a reduction in transactional costs associated with bounded rationality, asymmetric information and opportunism. It would seem bounded rationality is mitigated in crowdsourcing through a sharing of firm tasks, activities and capabilities across firm boundaries with (thousands or even millions of) crowd members and clients in some cases. It is postulated that bounded rationality might also be altered through the harnessing of collective intelligence or group wisdom via crowdsourcing means (Surowiecki, 2004). Firm F in particular claimed to be ‘crowdsourcing for geniuses’ and has, indeed, been the means to solve some of the world’s most difficult data problems. Asymmetric information is mitigated in crowdsourcing through strict governance and technological controls governing procedural transactional issues. Opportunism in crowdsourcing is reduced through the ‘organic’ operation of social mores concerning crowd community Internet behaviour, for example many crowd members took it upon themselves in Firm A to ‘police’ and report anti-social crowd behaviour, as well as the illegal admission of production items which transgress intellectual property rules.

Some of the ways TCE frames the value creation elements of crowdsourcing is summarised in Table 9.1 below.

### TABLE 9.1
TCE framework fit against grounded data findings from crowdsourcing firms

<table>
<thead>
<tr>
<th>Theoretical Framework</th>
<th>Specific value source elements against crowdsourcing</th>
<th>Aggregate Dimension source from grounded data (ref Fig 8.1)</th>
<th>Value creation driver elements from grounded data (ref Fig 8.3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCE</td>
<td>Huge scale and scope of crowdsourcing fosters economies of scale/scope</td>
<td>2. How it works: Crowdsourcing businesses must attract clients and large crowds who willingly participate anytime &amp; anywhere</td>
<td>Size and Scale: -Enormous &amp; increasing crowds -Unprecedented scaling of human resources -Global reach, developed &amp; developing</td>
</tr>
<tr>
<td>Community self-management points to</td>
<td>2. How it works: Crowdsourcing businesses</td>
<td>Efficiency</td>
<td>-Reduced transactional costs</td>
</tr>
<tr>
<td>2. How it works:</td>
<td>Efficiency</td>
<td>Size &amp; Scale</td>
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<tr>
<td>Crowdsourcing businesses must attract clients and large crowds who willingly participate anytime &amp; anywhere</td>
<td>-Reduced transactional costs</td>
<td>-Enormous &amp; increasing crowds</td>
<td></td>
</tr>
<tr>
<td><strong>Activities all online in one place leads to a reduction of search costs</strong></td>
<td><strong>Efficiency</strong></td>
<td><strong>Size &amp; Scale</strong></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>-Unprecedented scaling of human resources</td>
<td>-Global reach, developed &amp; developing</td>
</tr>
<tr>
<td><strong>Efficient money exchange leads to a reduction in bargaining costs</strong></td>
<td><strong>Efficiency</strong></td>
<td><strong>Size &amp; Scale</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Reduced transactional costs</td>
<td>-Enormous &amp; increasing crowds</td>
</tr>
<tr>
<td><strong>Anyone, anywhere, anytime plus scaling up or down fosters economies of scale</strong></td>
<td><strong>Efficiency</strong></td>
<td><strong>Size &amp; Scale</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Reduced transactional costs</td>
<td>-Unprecedented scaling of human resources</td>
</tr>
<tr>
<td><strong>Task-centric exchange with no slack resources</strong></td>
<td><strong>Efficiency</strong></td>
<td><strong>Size &amp; Scale</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Reduced transactional costs</td>
<td>-Global reach, developed &amp; developing</td>
</tr>
<tr>
<td><strong>Contest efficiencies reduce bargaining costs</strong></td>
<td><strong>Efficiency</strong></td>
<td><strong>Size &amp; Scale</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Reduced transactional costs</td>
<td>-Global reach, developed &amp; developing</td>
</tr>
<tr>
<td><strong>Successful supplier only is paid</strong></td>
<td><strong>Efficiency</strong></td>
<td><strong>Size &amp; Scale</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Reduced transactional costs</td>
<td>-Global reach, developed &amp; developing</td>
</tr>
<tr>
<td><strong>Efficient demand &amp; supply mediation reduces search/bargaining costs</strong></td>
<td><strong>Efficiency</strong></td>
<td><strong>Size &amp; Scale</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Reduced transactional costs</td>
<td>-Global reach, developed &amp; developing</td>
</tr>
<tr>
<td><strong>Ephemeral crowd reduces asset specificity</strong></td>
<td><strong>Efficiency</strong></td>
<td><strong>Size &amp; Scale</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Reduced transactional costs</td>
<td>-Global reach, developed &amp; developing</td>
</tr>
</tbody>
</table>
9.3.3 Value creation: TCE and crowdsourcing: How it does not fit

TCE, however, cannot fully and adequately explain value creation in crowdsourcing. In the rational markets underpinning TCE theory, demand for labour is met with supply of labour at a suitable exchange price point. The fact that in some crowdsourcing firms such as Firms A, F and G, almost all members of the crowd never get paid or seldom receive payment for their labour presents a puzzle for the rational market. Why would so many members of the crowd (rational labour suppliers in the market) continue to supply labour for no monetary return? In such a scenario, why would the crowd continue to supply labour instead of simply disappearing? Why are such firms’ labour pools growing exponentially and not shrinking, given this scenario? A related puzzle is why firms would rely existentially on such an impermanent and ‘fuzzy’ exchange partner as a ubiquitous, anonymous crowd. Crowdsourcing introduces certain irrationality to value creation and market exchange processes which TCE as a framework would usually eschew.

In addition, TCE is positioned as a firm-centric frame and posits the firm is the key locus of control of transactional costs and works to reduce transactional inefficiency. However in crowdsourcing firms, all parties including firm, crowd and clients, appear to share in many of the transactional inefficiency-reduction activities. These activities include important and central firm activities such as production over-supply mitigation - which is shared by crowd/clients with firms. Other firm activities which eschew the firm-centric frame of TCE include the often zero-cost crowd labour provision which challenges the market rationality of the crowd-side exchange partner. In addition, the sharing of and free-flow of information across firm boundaries generated by all three transactional parties in crowdsourcing is critical to the firm’s existence but not necessarily firm-originated or firm-centric as the TCE framework demands.

9.3.4 Value Creation: Schumpeterian innovation and creative destruction and crowdsourcing: How it fits

Schumpeterian innovation comprises five areas which include: the introduction of a new good or an innovation on a good (product innovation); a new method of production (process innovation), the opening of a new market (market innovation); a new source of supply of raw material or intermediate input (input innovation); and a new organisation of industry (organisational innovation) (Drejer, 2004; Schumpeter, 1934). All firms in
the study produced varying levels of Schumpeterian innovation. Firms A, D, E, F and G are dominant niche players in their respective industries – all providing niche services (service innovation), opening new markets (market innovation) and a new way of doing business (organisational innovation) through the injection of crowd input (input innovation) and thereby dominating their respective online markets. Firm G in particular injected product innovation by introducing a new type of good in the form of crowd-designed t-shirts. Firm G is an outstanding example of Schumpeterian innovation relentlessly producing new tailored products as a result of its co-producer crowd and quality production-sorting/voting crowd and consumer-oriented crowd. This has resulted in a new way of conducting business in its industry where product production and consumption are tightly inter-woven by means of the crowd. It has won major industry prizes for being among USA’s most innovative companies. It challenges closely-held conventional retailing production methods and places as a retail industry disrupter.

Table 9.2 below provides an overall summary of how Schumpeterian innovation provides a basis for value creation in the crowdsourcing firms in the study.

### Table 9.2

**Schumpeterian innovation framework fit against grounded data findings from crowdsourcing firms**

<table>
<thead>
<tr>
<th>Theoretical Framework</th>
<th>Specific value source elements against crowdsourcing</th>
<th>Aggregate Dimension source from grounded data (ref Fig 9.1)</th>
<th>Value creation driver elements from grounded data (ref Fig 9.3)</th>
</tr>
</thead>
</table>
| Schumpeterian innovation | New online product offering of its kind among the first in the world | 1. **What it is:** Firms based on crowdsourcing are new, unique and disruptive | **Innovation**
- New way to organise business & recruit workers
- Novelty, openness, firm boundary re-conceptualisation, heralding disruption
- New ‘system’ of business – combines all 3 parties in a unique & significant manner |
| | Higher choice offering than traditional industry offering | 1. **What it is:** Firms based on crowdsourcing are new, unique and disruptive 2. **How it operates:** Crowdsourcing businesses must attract clients and large crowds who willingly participate anytime and anywhere | **Innovation**
- New way to organise business & recruit workers
- New ‘system’ of business – combines all 3 parties in a unique & significant manner |
| | Unprecedented large supply | 1. **What it is:** Firms based on crowdsourcing are new, unique and disruptive | **Innovation**
- New way to organise business & recruit workers
- New ‘system’ of business – combines all 3 parties in a unique & significant manner |

234
2. **How it operates:**
Crowdsourcing businesses must attract clients and large crowds who willingly participate anytime and anywhere.

**Size & Scale**
- Enormous & increasing crowds
- Unprecedented scaling of human resources
- Global reach, developed & developing

| New market exploitation of small to medium enterprises | **1. What it is:** Firms based on crowdsourcing are new, unique and disruptive | **Innovation**
|------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------|
| **Innovative and novel business model**              | **1. What it is:** Firms based on crowdsourcing are new, unique and disruptive | **Innovation**
| Technical control innovation                         | **1. What it is:** Firms based on crowdsourcing are new, unique and disruptive | **Innovation**
| Client and/or crowd control waste/oversupply not firm| **1. What it is:** Firms based on crowdsourcing are new, unique and disruptive | **Innovation**
| Design industry disruption                           | **1. What it is:** Firms based on crowdsourcing are new, unique and disruptive | **Innovation**
|                                                      |                                                                                | Novelty, openness, firm boundary re-conceptualisation, moving to disruption |

**9.3.5 Value Creation: Schumpeterian innovation and creative destruction and crowdsourcing: How it does not fit**

Schumpeterian innovation, however, is inadequate alone to fully explain value creation in crowdsourcing. Camison and Monfort-Mir (2012) posit that the Schumpeterian concept of innovation performance does not provide for innovative capabilities nor does it reveal anything substantial regarding the creation of new types of organisations or new business models. Consistent with this view, Hori and Yamada (2013) advance the idea that Schumpeterian framing of innovation does not take into consideration the role of human capital explicitly. In terms of crowdsourcing, innovation is only part of the picture. The notion that crowdsourcing fosters innovative services/products, opens new markets, draws on new suppliers in terms of the crowd and fosters input innovation and provides a new way of doing business is important. However, is crowdsourcing simply an artefact of innovation or is it innovation plus more or is it something else entirely? Crowdsourcing may equally be seen simply as a mode of efficient economic transaction in a newly-created marketplace of the Web 2.0 Internet and thereby frame TCE with (or without) Schumpeterian innovation (Peng, Hill...
The crowd, the client and crowdsourcing’s organisational-type may equally be seen as potential value-creating resources for the firm. The fact that the crowd and client derive value, and not simply the firm, also means Schumpeterian innovation does not cover the whole picture of value creation and for whom it is created and who creates it. Schumpeterian innovation framing is unclear about the source of value creation beyond the firm and who the value-target or value-source is in the value creation process (Lepak et al., 2007). Dabic, Cvijanovic & Gonzalez-Loureiro (2011) suggest that Schumpeterian and neo-Schumpeterian positions frame the micro level of innovation much better than the macro level. How crowdsourcing therefore works when it is part of a holistic operational system is unclear when framed by Schumpeterian innovation.

Schumpeter (1943) posited the view also that firms compete through innovation – bringing to market new types and better products. Such a model also incorporates ‘creative destruction’ whereby ageing models are replaced by new, novel and attractive options for consumers and economic development is driven by the discontinuous emergence of new combinations (innovations) that are economically more viable than the old way of doing things (Drejer, 2004; Greenhalgh & Rogers, 2012). In terms of Schumpeterian creative destruction, crowdsourcing firms may be at some risk of obliteration from rival firms who may be able to attract equally large and able crowds. It is unclear, at this stage, what difficulties rival firms would encounter establishing rival crowds to those existing established crowdsourcing firms which have enjoyed first-mover advantage. What challenges a firm faces to retain its own (sometimes largely unpaid) crowd if better quality, more frequent or better-paying work were offered elsewhere by rivals to such a crowd are still yet to be established. How sticky (loyal) or not are each established crowdsourcing firm’s crowd? As one of the firm informants of Firm F states:

*It wouldn’t be at all hard to start a competitor; you just start doing exactly what we’re doing. And then the only advantage we’ve got is that we’ve got a bigger community behind us, but it’s not clear that if you put some decent prizes up on the new platform that the competitors who care about the money, who are the competitors who are likely to be the best ones, that they can find out about the new comp from their own networks and they can probably find out about it in a (Firm F) forum unless we try and censor them, and we, and I don’t think we have at this stage... (We have) a huge advantage, because...*
nobody else has a community of such great data scientists. The question is does it provide an advantage over all conceivable competitors and that’s less clear.

At this point, due to the nascence of crowdsourcing as a core business practice, such Schumpeterian obliteration predicted by the creative destruction theory is possibly too early in the cycle to play out fully given Web 2.0 style crowdsourcing has been practised barely a decade.

9.3.6 Value Creation: Resource-based view and crowdsourcing: How it fits

Each firm in the study indicated categorically that the crowd is their greatest resource. The sheer unprecedented size, global reach (with many firms operating in the range of 100 -192 countries) and niche specialities of each firm’s crowdsourcing workforce in its own industry could exemplify the elusive value-creating yardstick of the resource-based view VRIN and its value creating, competitive advantage-sustaining promise (Barney, 1991). In addition, the internal firm aspect of incredibly low ratio of employed firm staff to a corresponding enormous crowd labour workforce in the study’s crowdsourcing firms and the valuable methods devised by each firm of managing huge labour output to produce quality work are potential examples of VRIN. Table 10.3, which summarises some of the value creation elements related to the resource-based view is attached below.

<table>
<thead>
<tr>
<th>Theoretical Framework</th>
<th>Specific value source elements against crowdsourcing</th>
<th>Aggregate Dimension source from grounded data (ref Fig 9.1)</th>
<th>Value creation driver elements from grounded data (ref Fig 9.3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBV (VRIN)</td>
<td>Some firms are the world's fastest growing business in their market</td>
<td>1. What it is: Firms based on crowdsourcing are new, unique and disruptive</td>
<td>Innovation - New way to organise business &amp; recruit workers - Novelty, openness, firm boundary re-conceptualisation, heralding disruption - New ‘system’ of business – combines all 3 parties in a unique &amp; significant manner</td>
</tr>
<tr>
<td></td>
<td>Some firms are the world's biggest business in the specific marketplace</td>
<td>1. What it is: Firms based on crowdsourcing are new, unique and disruptive</td>
<td>Innovation - New way to organise business &amp; recruit workers - Novelty, openness, firm boundary re-conceptualisation, moving to disruption - New ‘system’ of business – combines all 3 parties in a unique &amp; significant manner</td>
</tr>
<tr>
<td></td>
<td>Firms attract huge niche</td>
<td>2. How it operates: Attraction / Engagement</td>
<td></td>
</tr>
</tbody>
</table>
| Global crowd, which can quickly, easily and cheaply scale up or down in huge numbers | Crowdsourcing businesses must attract clients and large crowds who willingly participate anytime & anywhere | - Attracting & keeping large crowds, clients  
- Establishing trust  
- Incentive placement  
- Collective intelligence |
| --- | --- | --- |
| $53 million prize money awarded in under 5 year period | 1. **What it is:** Firms based on crowdsourcing are new, unique and disruptive  
2. **How it operates:** Crowdsourcing businesses must attract clients and large crowds who willingly participate anytime & anywhere | **Innovation**  
- New way to organise business & recruit workers  
- Novelty, openness, firm boundary re-conceptualisation, movement to disruption  
- New ‘system’ of business – combines all 3 parties in a unique & significant manner  
**Attraction / Engagement**  
- Attracting & keeping large crowds, clients  
- Incentive placement |
| >217,000 contests held in under a 5 year period | 1. **What it is:** Firms based on crowdsourcing are new, unique and disruptive  
2. **How it operates:** Crowdsourcing businesses must attract clients and large crowds who willingly participate anytime & anywhere | **Innovation**  
- New way to organise business & recruit workers  
- Novelty, openness, firm boundary re-conceptualisation, disruption perception  
- New ‘system’ of business – combines all 3 parties in a unique & significant manner  
**Attraction / Engagement**  
- Attracting & keeping large crowds, clients  
- Incentive placement |
| Presence in 192 countries | 2. **How it operates:** Crowdsourcing businesses must attract clients and large crowds who willingly participate anytime & anywhere | **Attraction / Engagement**  
- Attracting & keeping large crowds, clients  
- Establishing trust  
- Incentive placement  
- Collective intelligence |
| Industry disrupter | 1. **What it is:** Firms based on crowdsourcing are new, unique and disruptive | **Innovation**  
- New way to organise business & recruit workers  
- Novelty, openness, firm boundary re-conceptualisation, disruption perception  
- New ‘system’ of business – combines all 3 parties in a unique & significant manner |
| Innovative cheaper, bigger offering | 1. **What it is:** Firms based on crowdsourcing are new, unique and disruptive | **Innovation**  
- New way to organise business & recruit workers  
- Novelty, openness, firm boundary re-conceptualisation, disruption perception  
- New ‘system’ of business – combines all 3 parties in a unique & significant manner |
| Small number of similar competitors and bigger than all direct competitors combined | 1. **What it is:** Firms based on crowdsourcing are new, unique and disruptive | **Innovation**  
- New way to organise business & recruit workers  
- Novelty, openness, firm boundary re-conceptualisation, disruption perception  
- New ‘system’ of business – combines all 3 parties in a unique & significant manner |
No slack resources

2. How it works:
Crowdsourcing businesses must attract clients and large crowds who willingly participate anytime & anywhere

Efficiency
- Reduced transactional costs
- Output/ task/results focus

Barriers to entry unclear at this point

2. How it works:
Crowdsourcing businesses must attract clients and large crowds who willingly participate anytime & anywhere

Efficiency
- Reduced transactional costs
- Output/ task/results focus
- Self-service, self-selection
- Economies of scale and size
- Opportunity reducing strategies
- Asset specificity/ sunk cost reduction
- Combining all 3 parties in an efficient system

Venture Capital investment in growth

1. What it is:
Firms based on crowdsourcing are new, unique and disruptive

Innovation
- New way to organise business & recruit workers
- Novelty, openness, firm boundary re-conceptualisation, moving toward disruption
- New ‘system’ of business – combines all 3 parties in a unique & significant manner

9.3.7 Value Creation: Resource-based view and crowdsourcing: How it does not fit

The RBV, however, cannot fully account for crowdsourcing value creation. There is no doubt the labour output of crowds in crowdsourcing firms is valuable because it produces revenue and profits and helps to create a certain firm heterogeneity. Also the size and scale of the crowds are likewise valuable and rare in comparison to other global firms. For example, in terms of size of crowds, Firm E has 7.5 million, Firm D has 5 million and Firm G has 2.5 million. These sizes are still bigger than the world’s biggest employing firms, which include Wal-Mart Stores Inc at 2.2 million people, G4S plc at 618,000 and Randstad Holding NV at 595,730 people (Hess & Serenbetz, 2014).

Yet, the resource of the crowd itself raises doubts in relation to the RBV. Makadok (2001) speaks of resources in relation to the RBV being purchased or acquired. The crowd cannot be purchased in the manner suggested by Makadok because monetary exchange is missing in most crowdsourcing exchanges. In addition, if a crowd could indeed be ‘purchased’, it would become quickly impossible for a firm to maintain enough funding to maintain the ‘stickiness’ of multiple millions of individual crowd members. In terms of acquisition, the crowd resource in crowdsourcing cannot be simply ‘acquired’ – it must be curated, inspired, attracted, maintained, showcased, provided with a sense of community and sometimes entertained.
In terms of the VRIN concept of the RBV, how inimitable and non-substitutable such crowds are may also be disputed. Almost all crowdsourcing firms in the study have been established under a decade. At this stage, most of the crowdsourcing firms (except Firm A) have not faced rival firms directly establishing rival crowds of any workable scale to imitate the crowd output and production of the firms in the study. As well, no firms in the study have to this point faced rival firms engaged in crowd substitution at any like scale.

In terms of substitutability, crowdsourcing poses an interesting conundrum. Does the ephemeral nature, the constant comings-and-goings of thousands of crowd members around the clock and the unprecedented scalability of the crowd constitute substitutability or not? Is such a type of ‘ever-shifting’ substitutability a natural outworking of a phenomenon of such global and size proportions? As one crowd member states in relation to her substitutability by the firm: “It sometimes feels like they – it’s more just like they know that if I quit doing it, there’s another thousand people out there that they would go get instead.” (KY, Firm D). However, despite this sentiment, the fact that individual crowd members may be substitutable does not dilute the fact that the crowd en masse attracted to the firms in the study would be difficult, in the short term at least, to substitute with other large crowds or with alternative methods of work production. It seems that if such a large crowd - as has been established by the study firms – started to abandon the firm by quitting with the consequence that the crowd fell to much lower numbers such a scenario may lead to lower output rates, decreased quality and potentially eventual market failure if crowds fell below a critical mass. The creation of economic rents in crowdsourcing, rather than being simply firm-centric, simultaneously involves both the act of establishing resource attraction/inspiration by the firm and corresponding ‘vested interest’ attraction/inspiration on the part of the crowd.

Amit and Zott (2001, p.497) express the view that virtual markets (similar to those characterising crowdsourcing) present a challenge to RBV theory:

As information-based resources and capabilities, which have a higher degree of mobility than other types of resources and capabilities, increase in their
importance within ebusiness firms, value migration is likely to increase and the sustainability of newly created value may be reduced.

In addition to this view, Teece (2010) expresses some level of doubt relating to newer eCommerce models in particular relating to their profit-generating potential being slow to emerge (Teece, 2010). The view expressed by Amit and Zott (2001) that value sustainability and longer term competitive advantage is diminished through the enhanced likelihood of resource/capability mobility in a crowdsourcing virtual market scenario suggests a profound challenge to the fit of RBV in terms of its aim of longer-term sustainable value creation. Where there is a strong environment of fluidity as with crowdsourcing, and where indeed the nature of the relationship attracting crowd to the firm can fluctuate in its ‘stickiness’, supports a view that RBV’s predicted value sustainability may be compromised or diminished as posited by Amit and Zott (2001). At the very least, the prediction of value sustainability of RBV is uncertain and while such markets are still relatively immature in line with the view of Teece (2010) – with most crowdsourcing firms being less than a decade old – value sustainability and ultimately sustained competitive advantage rests on somewhat shaky ground.

9.3.8 Value Creation: Dynamic capabilities and crowdsourcing: How it fits

In terms of dynamic capabilities framework (Teece & Pisano, 1994), all firms dynamically reconfigure their core capabilities to improve governance in terms of crowd control, management and mediation. Capabilities governing innovation have been re-configured to enhance each firm’s industry disrupting size and scope. Firm capabilities concerning structural elements have been improved to better crowd community self-regulation, system controls and to allow collective production to thrive. Firm capabilities around relationship and trust generation have been emphasised and heightened to develop better crowd retention and to increase crowd size. Firm capabilities have been re-configured to better hone technical capabilities to manage and control crowd and client mediation. In some firms, such as Firm C, considerable capabilities can vest in the crowd and such firms experience frequent capability reconfiguration due to the oft-changing work requested by the firm combined with sheer size and the changing and changeable nature of the crowd over time. A summary of the value creation potential of crowdsourcing in relation to the Dynamic Capabilities framework (Teece & Pisano, 1994) is attached in Table 9.4 below.
TABLE 9.4
Dynamic Capabilities framework fit against grounded data findings from crowdsourcing firms

<table>
<thead>
<tr>
<th>Theoretical Framework</th>
<th>Specific value source capability elements against crowdsourcing</th>
<th>Aggregate Dimension source from grounded data (ref Fig 8.3)</th>
<th>Value creation driver elements from grounded data (ref Fig 8.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dynamic Capabilities</strong></td>
<td><strong>Innovation</strong>: New bus model, perception of industry disruption perception</td>
<td><strong>1. What it is:</strong> Firms based on crowdsourcing are new, unique and disruptive</td>
<td><strong>Innovation</strong> - New way to organise business &amp; recruit workers - Novelty, openness, firm boundary re-conceptualisation, movement to disruption - New ‘system’ of business – combines all 3 parties in a unique &amp; significant manner</td>
</tr>
<tr>
<td><strong>Relationship</strong>: Crowd curation; Global crowd management; Crowd mediation</td>
<td><strong>2. How it operates:</strong> Crowdsourcing businesses must attract clients and large crowds who willingly participate anytime &amp; anywhere</td>
<td><strong>Attraction / Engagement</strong> - Attracting &amp; keeping large crowds, clients - Establishing trust - Incentive placement</td>
<td></td>
</tr>
<tr>
<td><strong>Governance</strong>: Trust building</td>
<td><strong>2. How it operates:</strong> Crowdsourcing businesses must attract clients and large crowds who willingly participate anytime &amp; anywhere</td>
<td><strong>Attraction / Engagement</strong> - Attracting &amp; keeping large crowds, clients - Establishing trust - Incentive placement - Collective intelligence</td>
<td></td>
</tr>
<tr>
<td><strong>Growth</strong>: New market expansion, business search, workforce expansion</td>
<td><strong>1. What it is:</strong> Firms based on crowdsourcing are new, unique and disruptive</td>
<td><strong>Innovation</strong> - New way to organise business &amp; recruit workers - Novelty, openness, firm boundary re-conceptualisation, movement to disruption - New ‘system’ of business – combines all 3 parties in a unique &amp; significant manner</td>
<td></td>
</tr>
<tr>
<td><strong>Innovation</strong>: Industry disruption perception</td>
<td><strong>2. How it operates:</strong> Crowdsourcing businesses must attract clients and large crowds who willingly participate anytime &amp; anywhere</td>
<td><strong>Attraction / Engagement</strong> - Attracting &amp; keeping large crowds, clients - Establishing trust - Incentive placement - Collective intelligence</td>
<td></td>
</tr>
<tr>
<td><strong>Structural</strong>: System controls, technical controls, community self-management, collective production</td>
<td><strong>2. How it works:</strong> Crowdsourcing businesses must attract clients and large crowds who willingly participate anytime &amp; anywhere</td>
<td><strong>Efficiency</strong> - Reduced transactional costs - Output/ task/results focus - Self-service, self-selection - Economies of scale and size - Opportunism reducing strategies - Asset specificity/ sunk cost reduction - Combining all 3 parties in an efficient system</td>
<td></td>
</tr>
<tr>
<td><strong>Technological</strong>: High level tech overlay, wholly online firm, high levels of</td>
<td><strong>2. How it works:</strong> Crowdsourcing businesses must attract</td>
<td><strong>Efficiency</strong> - Reduced transactional costs - Output/ task/results focus</td>
<td></td>
</tr>
</tbody>
</table>
9.3.9 Value Creation: Dynamic capabilities and crowdsourcing: How it does not fit

The dynamic capabilities framework, however, cannot fully account for crowdsourcing value creation. Crowdsourcing firms must, over time, reconfigure resources and capabilities to maintain, attract and/or grow value. However, crowdsourcing presents a dilemma for firms wishing to reconfigure their capabilities in terms of the degree of loyalty of the crowd, which is central to the existence of the firm that relies heavily on exogenous-to-the-firm crowd capabilities. DCV framework would usually suggest that a crowdsourcing firm would actively reconfigure its resources and capabilities over time to continue to attract, maintain and grow its crowd. However, where such crowds are growing organically and exponentially it might be difficult to attribute this to the firm’s dynamic capability strategy. All case study firms report their growth as ‘organic’ which implies the crowd grew itself with little reliance on carefully and strategically configured sustained management capabilities. All firms saw their crowd as having strong degrees of self-management.

It is also difficult to understand the application of firm-centric dynamic capability strategy to crowdsourcing firms which continue to derive key firm capabilities from a crowd resource which is so remote from the firm and so changeable. Through its ability to self-govern, the crowd itself – albeit paradoxically amorphous and free-wheeling - has thereby adopted some dynamic capabilities that usually reside inside firms with firm managers. This has meant that crowds associated with the crowdsourcing firms in the study involved themselves in activities outside the firm which at times they brought inside the firm. Firm activities and even firm competencies including product development, decision-making, business expansion activities as well as marketing, sales and public relations activities were oftentimes shared by the firm with their corresponding remote, amorphous crowd or even relegated wholly to the crowd. What is surprising is that firms can rely so heavily for key firm activities and traditionally firm-vested capabilities on a crowd resource which is amorphous, anonymous, remote,
ephemeral, in many instances unpaid, untrained (by the firm) and not engaged or contracted in a traditional manner. The Dynamic Capabilities framework does not support the notion that firm dynamic capabilities originate from and/or are shared with a remote, anonymous party like a crowd, which is wholly external from the firm.

9.4 Wider boundaries of value creation: consumer perspective and crowdsourcing

This study develops the work relating to the ‘consumer’ (‘downstream’, demand-side) perspective of value creation, developed by Priem (2007) and later by Priem, Li and Carr (2012) and Priem, Butler and Li (2013) which positions the ‘downstream’ consumer as an essential value arbiter. The value in such a shared value arbitration frame as this focuses ‘downstream’ from the ‘upstream’ firm to both product markets and consumers in order to explain and predict firm intervention that increases value in a value system (Priem, Li & Carr, 2012). This shared (firm/consumer) value arbitration ‘downstream’ framework posits value being determined outside the firm rather than traditionally inside the firm and sees that consumers utilising and disbursing benefits flowing out from an ‘upstream’ firm are essential to any firm’s ultimate success. Priem (2007) states that: “Consumers are arbiters of value...Many defunct ‘dot-coms’ simply failed to provide sufficient consumer value. The lesson? Willing consumers validate the value of products and services” (p.219).

The study extends the existing body of research on the consumer perspective of value creation, and the associated widening of the strategy boundaries of value creation developed by Priem, Butler and Li (2013), forward through the provision of grounded data relating to the critical importance of the downstream consumer in the creation of value. Indeed, the data provides some evidence that the consumer - vested in the crowd - as with Firm G in particular is providing key capabilities and productivities necessary to the very existence of the firm. One of the key findings in the grounded research in the study is that all three parties, that is the firm, client and crowd, were all critical to the successful functioning of crowdsourcing firms. Put simply, crowdsourcing firms would cease to exist without their corresponding crowd.

The consumer perspective, as framed by Priem, Butler and Li (2013, p.471), suggests that firms oftentimes enter strategic alliances with other firms which are motivated
chiefly by their target consumers’ “expressed, anticipated, or latent needs”. The business landscape in more recent times dictates that many modern firms must be mindful of the consumer and position themselves strategically to be consumer-driven. Priem, Butler and Li (2013) called for scholars to re-examine or extend research findings concerned with value creation to account for the ‘downstream’, demand-side, consumer perspective.

The current study of crowdsourcing firms suggests that the firm’s crowd, which acts as both labour producer and at times consumer simultaneously, are of critical importance to the value creation strategy of the firm. Not only do crowdsourcing firms need to be consumer-driven, they must operate in a way to attract huge, mostly unpaid or lowly paid crowds of workers to provide labour output. This means in effect crowdsourcing firms also need to be (labour) supply-driven and work strategically to attract, engage and form a type of informal alliance with large crowds of labour-suppliers.

Some crowdsourcing firms’ crowds also function as the consumer as well as the labour supplier simultaneously. This applies to three firms (B, G and P) in the study. Such crowds function ‘upstream’ by providing labour production or ideas or decision-making or marketing toward the development of the firm’s products. The work the crowd provides is not trivial and the crowdsourcing firms rely existentially on the low cost or no cost labour provided by the crowd. In the same cycle, the same crowd will also function ‘downstream’ to purchase the same products which they helped produce, create or improve earlier in the ‘upstream’ cycle.

The consumer perspective (Priem, Butler and Li, 2013) accounts for the target consumers’ needs in value creation and the current study builds and extends this framework by adding the notion that many crowdsourcing firms attract and alliance themselves with labour suppliers (the crowd) who are simultaneously the firm’s target consumers (also the crowd) who work in tandem with the crowdsourcing firm to provide for their (the consumer crowds’) own ‘expressed, anticipated or latent needs’.

The consumer/demand side view developed by Priem, Butler and Li (2013) envisaged a system which moved from left to right or upstream to downstream when
accounting for a business cycle of upstream firm-centric producer transforming and moving its resources or services downstream to the target consumer. The crowdsourcing firm brings in endogenously the right-side, downstream end-point consumer by effectively sitting it inside or alongside the firm in what is usually the left-side, upstream firm-centric locus. The end-point consumer crowd is used by the firm in an existential manner to produce and decide its final products. This type of crowdsourcing operates well beyond the application of user innovation developed by Von Hippel (1976) and co-creation developed by Prahalad and Ramaswamy (2004) because of the existential manner in which it is being used. The crowd effectively at times takes the form of both the firm and the consumer within a single business cycle by providing productive and decision-making labour critical to the existence of the firm and also consuming the firm’s products in their final form.

In addition, some crowdsourcing firms’ crowds do not operate as consumers, yet these firms will utilise their end-point consumers who are separate from their crowd members at upstream points in the business cycle, as well as at later downstream points. These crowdsourcing firms encourage clients (consumers) to self-select and to follow an automated online system of posting and updating work requirements, of crowd interaction, and of subsequent payments for completed work that requires no direct time expenditure from the firm. Quality of the crowd work is controlled by system-controlled algorithms (Firms C, D and F) or through client (consumer) discretionary choice (Firms B, E and G). Through such systems requiring almost no direct intervention or time expenditure by the crowdsourcing firms and enlisting the labour of others - whether it be crowd or client - these crowdsourcing firms are able to produce scaled work at unprecedented levels. For example, staffed with only 50 employees, Firm D’s CEO claims to “produce several human years of work a day” through its enormous crowd, and Firm A receives production items every five seconds around the clock.

The consumer perspective is extended through the novel manner of crowdsourcing firms working to inject the consumer perspective both upstream and downstream in the same business cycle with significant, indeed existential, alliance with either self-
selected and self-managing clients (consumers) and/or functional supplier/consumer crowds.

The grounded study provides data to help to generate insights to understanding how crowdsourcing firms use crowd as critical arbiters of value and as existential partners in upstream and downstream elements of the business cycle. The well-developed focus on the firm as the central arbiter of value in the RBV and other firm-centric viewpoints like DCV and TCE in strategic management (Priem, Butler & Li, 2013) might well be supplemented or even altered by some of the newest business phenomenon like crowdsourcing. The strange form of the actual resource of the crowd, which is impermanent, amorphous, anonymous and remote from the firm, is surprising and unique. That such an unusual form of resource could be considered valuable at all, much less critical to any firm’s very existence, is remarkable. The way the firm endogenously brings in the crowd to the firm, in an existential manner, and also utilises the same crowd as consumer, is likewise surprising and unique. Crowdsourcing combines upstream and downstream elements of demand and supply in a unique manner which may challenge the wholly firm-centric view of value creation.

9.4.1 Widening the boundaries of value creation further: systemic perspective of the business model and crowdsourcing

This study also develops the work relating to ‘holistic, systemic’ perspective of value creation, which highlights the business model as a worthy locus of business creation potential (Priem, Butler & Li, 2013; Zott, Amit & Massa, 2011). In these frameworks, the business model draws in a wider group of value-complementors to value creation than simple producer and/or consumer and by so doing also helps extend the boundaries of strategy research still further than by simply incorporating the demand/consumer-side perspective to value creation (Priem, Butler & Li, 2013). This widening of the boundaries of strategic management research associated with value creation sees business models as holistically providing a ‘big picture’ relating to the whole value created by and for producers (the firm), consumers and by and for others - such as the suppliers - and how such an entire ‘system’ works together as a unit to create value.
The grounded data in the study suggested that all three parties, that is firm, crowd and client strongly functioned as a symbiotic unit, which was a key operational imperative in crowdsourcing. Due to the fact that each party was so strongly aligned to the very existence of the firm, with the crowd in particular being an existential factor to crowdsourcing-centric firms’ ongoing viability, this holistic functioning of all parties as a system was critical to each firm in the study. The value being driven for and by each of these three parties work to form the notion that crowdsourcing could be viewed as a system/activity/strategy of business or more pointedly as a business model.

An emerging stream of literature has focussed more recently on the business model and its close links to value creation. Casadesus-Masanell and Ricart (2010, p.197) state: “a business model is about how an organization earns money by addressing these two fundamental issues – how it identifies and creates value for customers, and how it captures some of this value as its profit in the process.” The business model literature emphasises that the business model is a more holistic and broader-reaching concept than single theory concepts like the RBV and DCV. Amit and Zott (2001) conclude that business models cannot be defined by or explained completely by single theories or even combinations of those. For example, they examined Schumpeterian innovation, the RBV, dynamic capabilities, transaction cost economics, strategic networks and value chain analysis and concluded that while each explains pieces, none fully explain business model operation.

Crowdsourcing may also be viewed in this manner. For example, crowdsourcing may be seen as a phenomenon which fosters the value-increasing creation of higher order capabilities and resource acquisition in firms or as an efficient way of reducing transactional costs in a marketplace but equally it may be seen as a value-creating strategic embodiment of firm architecture or structure represented by the business model.

9.4.2 Is crowdsourcing a new business model?
Organisation structure is increasingly perceived as an important element in accounting for differences in organisation performance and can be a potential source of competitive advantage (Christensen, 2001; Richardson, 2008). Such organisation structure has recently been represented by the business model adopted by the
organisation and established as a significant contingent factor in organisation performance (Zott & Amit, 2008). The business model is defined as a ‘structural template that describes the organisation of the focal firm’s transactions with all of its external constituents’ (Zott & Amit, 2008, p. 1). It is seen as a potential vehicle for the realisation of economic value and the further creation of competitive advantage (Chesbrough & Rosenbloom, 2002; Morris, Schindehutte & Allen, 2005). In terms of an organisation’s management of strategy, the business model has recently come to be described as “a reflection of the firm’s realized strategy” (Casadesus-Masanell & Ricart, 2010, p.195). Richardson (2008) posits that the business model is a conceptual framework that helps link the strategy of the firm – or theory of how to compete – to its business activities. Trompette et al. (2008, p.3) remark that “crowdsourcing conveys new patterns of arrangements to organize, co-ordinate and control economic activities”. Similarly, Google CEO, Eric Schmidt sees crowdsourcing as a way to harness new modes of production in order to take innovation and wealth creation to new levels (Tapscott & Williams, 2006).

A discussion of crowdsourcing as a potential business model fits neatly into this chapter’s earlier discussion regarding academic insight that crowdsourcing predicts a type of new organisational form to emerge and can be characterised as non-hierarchical, permeable, interconnected and modular (Afuah & Tucci, 2012; Schilling & Steensma, 2001). Crowdsourcing in a conception as a business model with unique elements amplifies itself indeed as a new type of organisational form which is very much non-hierarchical, permeable, interconnected and modular (Schilling & Steensma, 2001). As a new type of work arrangement and organisational form, crowdsourcing along with its core systemic components of firm-crowd-client, can be distinctly classified as a new business model (Afuah & Tucci, 2012; Cappelli & Keller, 2013).

This is further amplified by the number of scholars writing about crowdsourcing who naturally associate it as a business model (Andriole, 2010; Annibell, 2010; Chanal & Caron-Fasan, 2010; Euchner, 2010, Favaro & Pfleeger, 2011). In addition, in the study, the ‘business model’ was the most used concept term in relation to explanations of crowdsourcing found in the initial impression-seeking of the phenomenon of crowdsourcing through scholarly investigation (see Chapter 3). In addition, there were
13 unprompted references to crowdsourcing being a ‘business model’ by interview informants - including both executive and crowd informants.

Scholars have attempted to break the business model into components including value proposition, customer, internal competencies, key processes and key resources as well as an economic model/profit formula (Johnson et al., 2008; Morris et al., 2005; Osterwalder et al., 2005). As well, there has been recent scholarly interest in the business model activity system and related focus on design parameters and value creation perspectives (Baden-Fuller & Morgan, 2010; Teece, 2010; Zott & Amit, 2008; Zott, Amit & Massa, 2011). Crowdsourcing through its value drivers (see Figure 9.3) combining its essential characteristic of innovation with its activity-based operational functioning elements of attraction/engagement, size scale and efficiency work to create a unique economic model/ profit formula and thereby suggests it can be conceived as a business model.

Zott and Amit (2010) specifically characterise the business model activity system through design themes of ‘novelty’, ‘lock-in’, ‘complementarities’ and ‘efficiency’. ‘Novelty’ represents new activities, new ways of linking the activities or new ways of governing activities in a system. ‘Lock-in’ is a means to anchor third parties as business model participants. ‘Complementarities’ provide a bundling-of-activities-advantage whereby more value is created than by running activities separately. ‘Efficiency’ provides transaction reducing costs. These design themes detail a generic business model’s value creation drivers. In a similar vein, crowdsourcing firms in the study have created business models with distinctive design themes which help to capture the crowdsourcing firms’ key value creation drivers. The grounded data reveals that value drivers can be retro-fitted to the generic design themes created by Zott and Amit (2010) but with some additional unique-to-crowdsourcing value drivers added on including ‘attraction’, ‘engagement’ and ‘size/scaling’ (see Figure 9.1 below). These value drivers were formulated and explained in detail in the previous Findings chapter (see Figure 8.3).
**FIGURE 9.1**


| **Business Model activity system design parameters (Zott & Amit, 2010) retro-fitted to crowdsourcing** |
| **New Business Model activity system parameters particular to crowdsourcing** |
| --- | --- |
| **Novelty:** |  |
| **Content** – A crowd can produce significant and valuable work for a firm which does not pay, train, provide physical workplace or equipment or even know or name them. All three parties elicit mutual benefit and impart value. |
| **Structure** – The crowd can enter a firm’s boundary on multiple occasions in a business activity process. The crowd can function as both producer and consumer in a business activity process. The crowd can enter the firm boundary to extend firm capabilities. |
| **Governance** – The crowd can function as an organic, self-regulatory entity. A firm can elicit significant crowd intelligence from a large crowd. Technical and standardised processes can significantly automate governance. |
| **Lock-in:** Firms must retain the crowd through providing meaningful and motivating work and/or inspiring firm activity. Firms must offer their clients more valuable services and products than rivals. |
| **Complementarities:** Firms have created crowdsourcing models where crowd function has been bundled into both producer and consumer and occurs fluently and dynamically in the same business activity. Firms have re-purposed discarded, unpaid crowd production into separate lower-cost after-markets. |
| **Efficiency:** Transaction costs are greatly reduced because activity approaches 100% task utilisation. Firms automate processes to encourage client self-service. Completed unwanted crowd production is efficiently discarded via technology, crowd or client decision-making processes. Only successful crowd members are paid. |

**NEW BUSINESS MODEL DESIGN PARAMETERS PARTICULAR TO CROWDSOURCING**

| **Attraction:** |  |
| Firms must attract very large crowds of more than 100,000 on a constant basis. Firms must motivate the crowds to produce work which is often unpaid. Crowds may also be attracted to consuming a firm’s services or products. |
| **Engagement:** Firms must engage clients in the process to ensure transactional efficiency. Clients (or crowds) must be willing in some cases to self-serve to varying levels and to sort and discard bulk crowd production. |
| Firms must engage crowds and inspire them to produce (unpaid) work. Firms must engage crowds to complement, substitute or replace firm capabilities. Firms must rely on crowds as a critical resource necessary to the firm’s very existence. |
| **Size and Scaling:** Very large crowds and therefore potential workforce can be created in hyper cycles. The crowd can be scaled up in a business cycle to comprise an extremely large workforce and in a similar cycle can be scaled down again for single business activity tasks. This scaling of crowds of thousands may be achieved by crowdsourcing firms in less than 24 hour timeframes. |
So, as Figure 9.1 above illustrates, the value drivers of crowdsourcing build and extend the generic business model value driver design themes developed by Zott and Amit (2010). The dominant value drivers of crowdsourcing, as revealed by the grounded data findings included: ‘innovation’, ‘attraction/engagement’, ‘size/scale’ and ‘efficiency’. The crowdsourcing firms’ value drivers (see Figure 8.3) of ‘innovation’ and ‘efficiency’ could be subsumed into Zott and Amit’s (2010) generic business model design themes of ‘novelty’ and ‘efficiency’. The remaining value drivers associated with crowdsourcing create new value drivers which extend Zott and Amit’s (2010) original business model value design theme framework and are unique to a crowdsourcing business model.

In terms of the crowdsourcing firms in the study, the business model design parameters particular to crowdsourcing of attraction, engagement, size and scaling, are linked and summarised in Table 9.5 below:

<table>
<thead>
<tr>
<th>Firm</th>
<th>Attraction</th>
<th>Engagement</th>
<th>Size and Scaling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm A</td>
<td>Crowd attraction includes employment, income, career/ personal development, esteem, a creative outlet, work-life balance, learning and client-building opportunities.</td>
<td>Firm strategically curates and builds a large community of designers. Crowd self-regulate and moderate and engagement is maintained through community engagement among and between designers.</td>
<td>Attracts 228,000 designers in 192 countries. Only successful single crowd member paid. Scale of production is a new item is created every 5 seconds around the clock, every day.</td>
</tr>
<tr>
<td>Firm B</td>
<td>Crowd attraction includes personal development, esteem, a creative or philanthropic outlet and learning opportunities.</td>
<td>Crowd is engaged through democratic principles: giving a voice to equal partners in success and engages on community-style model. Engagement is maintained through engaging individual passions of crowd.</td>
<td>Attracts a crowd of ‘brand fans’ of up to 200,000. Task-centric work. Can scale easily up to many thousands on a daily basis.</td>
</tr>
<tr>
<td>Firm C</td>
<td>Crowd attraction includes employment, income, career/ personal development, esteem, a philanthropic outlet, work-life balance, learning, teaming- and leadership- opportunities.</td>
<td>Crowd is engaged via a social-grid model. Insiders recommend and bring in ‘trusted’ members of their own social crowd. Crowd snowballs. Engagement is maintained by individual training and corporate social responsibility programs.</td>
<td>Attracts a workforce crowd of 150,000. Task-centric work. Can scale easily up to multiple thousands. Technological quality control will automatically discard poor-/non-performers.</td>
</tr>
<tr>
<td>Firm D</td>
<td>Crowd attraction includes employment, income, work-life balance opportunities.</td>
<td>Crowd is engaged by the ubiquity of the work. It is available to all-comers at any time. All work successfully completed is paid.</td>
<td>Attracts contributors from more than 208 countries. Can scale up to 100,000 on a half-day basis.</td>
</tr>
<tr>
<td>Firm E</td>
<td>Crowd attraction includes employment, income, career development, work-life balance, client-building opportunities.</td>
<td>Crowd is engaged through work being specialised to particular skill-sets and the opportunity for successful crowd members to build a new client base. Engagement is enhanced through publicly-</td>
<td>Attracts a workforce crowd of over 7.3 million in almost all global countries. Huge workforce is entirely scalable. A posted job will attract a response within less than 10 seconds.</td>
</tr>
<tr>
<td>Firm F</td>
<td>Crowd attraction includes career/personal development, esteem, a creative outlet, learning and teeming opportunities</td>
<td>Crowd is engaged through the mental challenge posed by the crowd-contests and the opportunity to engage and sometimes team with a community of like-minds.</td>
<td>Attract crowds from more than 100 countries. Prestige of competition and inherent mental challenge of the task will attract bigger or smaller crowds.</td>
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</tr>
<tr>
<td>Firm G</td>
<td>Crowd attraction includes career/personal development, esteem, a creative or philanthropic outlet, work-life balance, learning and client-building opportunities</td>
<td>Engagement is through entertainment and fun. The crowd determine their own consumer outcomes. The artist crowd are engaged through the feedback from the artist community and an opportunity to build a new client base.</td>
<td>Attracts a multi-use crowd of over 2.5 million. Attracts a scale of production of more than 300 designs daily. These are scaled back and quality-controlled through crowd-based decision-making</td>
</tr>
</tbody>
</table>

9.5 Conclusion

The discussion chapter was loosely divided to reflect discussion upon the two research questions.

The first section of the discussion, based primarily on the first research question, examined a common industry definition (Howe, 2006b) and a scholarly definition of crowdsourcing (Estelles-Arolas & Gonzalez-Ladron De-Guevara, 2012) against the findings in the study. The existing scholarly definition was extended via specifying more precisely what the crowd bring to crowdsourcing. An alternative, more streamlined definition was suggested based on the empirical data of the study.

Further discussion centred on disentangling conceptual characterisations of crowdsourcing from related concepts such as open source, open innovation, outsourcing and collective intelligence. Further insights were provided relating to crowdsourcing as a potential new organisational practice and form.

The last part of the discussion focussed on value creation. The findings were examined against the traditional strategic management value creation theories comprising TCE, Schumpeterian innovation and creative destruction, the RBV and VRIN and the DCV. The specific areas of crowdsourcing and its value creation potential fit against each traditional theory were illustrated in tables. In addition, an examination was conducted of where the traditional theory could not fully explain the value creation in crowdsourcing.
Beyond the traditional value creation frameworks, further perspectives of value creation such as the consumer perspective and systemic perspective, was also discussed. The discussion moved from the established ‘inside-the-firm’ value creation to a more boundary-widening viewpoint encompassing value systems like the business model and the consumer perspective in value creation (Priem, Butler & Li, 2013). The consumer perspective was extended through the novel manner of crowdsourcing firms working to inject the consumer perspective both upstream and downstream in the same business cycle via non-trivial alliance with either self-selected and self-managing clients (consumers) and/or functional supplier/consumer crowds.

The discussion argued that crowdsourcing was indeed a unique business model and created value through a system-wide perspective. Its own distinctive business activity system design themes were retro-fitted to the existing business activity design framework (Zott & Amit, 2010). In addition, new business model design parameters were added to the existing framework that were exclusive to crowdsourcing.
10. CONCLUSION

10.1 Introduction

This study is among the first empirical qualitative study that builds knowledge of the real-world workings of crowdsourcing firms and thereby contributes understanding and learnings toward the nascent field of crowdsourcing and its value creation potential. The research data, based primarily on eight crowdsourcing firms in four countries and in multiple industries, helps build knowledge in terms of how a crowdsourcing firm practices crowdsourcing, how the crowd is attracted and utilised and how both the firm and crowd may benefit from crowdsourcing. It is clear from the findings that all party stakeholders are very important to the functionality of a crowdsourcing-centric firm and indeed these firms existentially rely on the productive inputs and the labour outlays of all parties within the crowdsourcing system.

In addition the study helps with a general understanding of how crowdsourcing can bring in a global presence, diversity and foster meritocracy in a business, which are important factors in modern business survival. Given the exponentially increasing size and worldwide scale of crowdsourcing and the questions it raises in terms of how it is practised, it is under-studied at the present time (Afuah & Tucci, 2012). This is a conclusion that is consistent with views expressed that Internet-based business models are still emerging in terms of viable value creation and again this related subject also remains under-studied (Teece, 2010). Crowdsourcing predicts an increasing trend toward truly viable Internet-based business models which give and create value.

This chapter is structured as follows. Firstly, the chapter outlines how the study has contributed to the body of knowledge in terms of theoretical frameworks. The following section provides a detailed discussion on the practitioner implications of the study. The next section recognises the limitations of the research and the final section examines future research directions and provides concluding remarks.
10.2 Theoretical Contribution

10.2.1 Establishment of new value drivers of crowdsourcing in established business model design

The key scholarly contribution of the study is that value drivers in crowdsourcing firms can be retro-fitted to the generic value drivers for business model design, comprising the four elements of ‘novelty’, ‘lock-in’, ‘complementarities’ and ‘efficiency’ established by Zott and Amit (2010). Yet at the same time - in tandem with the retro-fit elements - also have additional unique-to-crowdsourcing value drivers of ‘attraction’ and ‘engagement’ and ‘size’ and ‘scale’.

The crowdsourcing business model retro-fits well into the existing model via value drivers established in the findings of ‘novelty’ (innovation) and ‘efficiency’ and examples could be provided of where crowdsourcing firms might use ‘lock-in’ and ‘complementarities’. New value drivers that were particular to a crowdsourcing business model including ‘attraction’, ‘engagement’, ‘size’ and ‘scaling’ were drawn from the empirical data in the study.

Therefore, this study builds and extends the business model framing of Zott and Amit (2010) by retro-fitting crowdsourcing within its established generic business model design and adding new unique elements.

10.2.2 Crowdsourcing is a phenomenon which achieves value through holistic systemic operation

A second scholarly contribution is to position crowdsourcing as an entity which achieves value via a holistic systemic operation. Again, this scholarship responds to calls from Priem et al. (2013) to extend the traditional boundaries of value creation research outside the firm. This work outlines that, in addition to the consumer perspective, the ‘system’ of value creation such as the ecosystem or business model may be very important.

The findings illustrate the ‘system’ of value creation framework of Priem et al. (2013) through the notion that crowdsourcing existentially involves all three parties of firm, crowd and client to its operational functioning. As simple as it sounds, crowdsourcing firms must have a crowd and would not survive without their crowd (or obviously their clients). This working together as a unit of all parties highlights that
crowdsourcing is a business model and part of a wider system of functioning of its composite parts. Being part of a business model broadens the value creation boundaries to encapsulate more than the firm and provides a more sophisticated operational picture of value creation than simple producer–consumer paradigms.

10.2.3 Examination of how traditional value creation theories fail to fully explain crowdsourcing value creation

Laying the groundwork for the previous contribution, an initial scholarly contribution of this study was to provide grounded frameworks and to examine how traditional value creation frameworks work with regard these newly-established frames.

The study offers key touch-points in terms of how transaction cost economics, Schumpeterian innovation, the resource-based view and the dynamic capabilities view fit against the empirical findings of how crowdsourcing firms create value. These four traditional value creation theoretical frameworks do provide a very useful starting point in terms of where and how value is created in crowdsourcing firms.

However, these traditional frameworks are not wholly adequate to explain some of the more unusual aspects of crowdsourcing. For example, the curious nature of the crowd, given it may be viewed as a remote, unformed and imprecise resource, also challenges traditional views associated with the RBV on what constitutes a firm resource, which are usually purchased or acquired (Makadok, 2001). It is interesting that such an indefinite, vague and fluid resource might potentially constitute a crowdsourcing firm’s VRIN. In addition, the same puzzle applies to DCV, whereby crowds are ‘fuzzy’ and imprecise in their nature and capabilities seen to be growing organically - it is difficult to attribute such capabilities directly to any crowdsourcing firm’s deliberate dynamic capability strategizing.

In terms of TCE, the fact that crowd members are rarely paid for their labour presents a puzzle for the rational market in terms of the supply of crowd labour not just continuing but indeed burgeoning. It appears that in crowdsourcing it is enough for an economic exchange partner (individual crowd members) to be attracted to the market exchange by the mere potential promise of tangible (rational) reward.
In terms of Schumpeterian innovation framing, the locus of value creation presents challenges, for example the source of value creation beyond the firm is not clear as well as the locus of the value-target or value-source in the value creation process (Lepak et al., 2007).

Therefore, the research findings included boundary conditions and shortcomings against each of these traditional theories. This discovery led to seeking further explanations related to the value creation of crowdsourcing.

10.2.4 Extension of consumer perspective on value creation

By way of further explanations related to value creation and crowdsourcing, the study focused on more recent scholarship designed to extend the “normal” orthodox firm-specific boundaries related to value creation in the strategic management field (Priem, Butler & Li, 2013, p.471). This extension of orthodox firm-specific boundaries focuses not just on the firm as critical to value creation but outside-the-firm stakeholders as additional critical value arbiters.

This research study, therefore, provides scholarship in response to the calls for further research issued by Priem et al. (2013) in relation to illustrating and potentially extending the focus of traditional strategy management scholarly notions of value creation outside-the-firm and specifically downstream encompassing the consumer perspective. The empirical data in this study provides much by way of illustration into how the consumer perspective can and does function in a real business setting. Crowdsourcing-centric firms work in an existential manner with crowds so that such crowds become a critical arbiter of value in accordance with the consumer perspective of value creation (Priem et al., 2013). This study illustrates the over-riding curiosity that crowdsourcing firms rely on such remote, anonymous crowds for mission-critical firm capabilities such as new product creation and decision-making while (some firms are) also relying on the same crowds to consume its products.

However, beyond simply providing research detail to help illustrate the consumer perspective of value creation, this study takes steps to expand on this perspective (Priem et al., 2013). It does so by the novel injection of such consumer perspective functioning both upstream (producer-level) and downstream (demand-level) simultaneously in crowdsourcing firms. Crowdsourcing operates not so much in the usual ‘left-to-right’
producer up-/consumer down-stream paradigm but in an unorthodox manner via a multi-directional pathway, where downstream elements may operate up-stream in the same business work-flow cycle. Crowds may function upstream effectively inside the firm at early points in the cycle to produce items or ideas, assist with decision-making and market products and, then, later downstream to purchase those same products. The same crowd, albeit with additional new crowd members, may operate in up- and down-stream phases concurrently. Individual crowd members may be frequently submitting or ideating production items, helping choose the best items and consuming the company sale items in a continuous and non-linear-path-dependent manner. The consumer is both arbiter of value as well as producer of and contributor to value within the firm in this manner.

10.2.5 Creating definitional nuance and clarity related to crowdsourcing as a concept

The findings in the study help provide further definitional nuance to an established scholarly crowdsourcing definition (Estelles-Arolas & Gonzalez-Ladron De-Guevara, 2012). The data suggested the established definition be enhanced by the descriptor of ‘large’ or a similar when referencing the ‘crowd’ (also referenced as ‘group of individuals’). This is due to the fact that inside a functional crowdsourcing firms crowds usually reach a minimum of 100,000 individuals.

In the same vein, crowdsourcing firms operate globally in almost every country and crowds likewise are also from almost every country. It was suggested the established definition (Estelles-Arolas & Gonzalez-Ladron De-Guevara, 2012) might have the word ‘global’ or similar included. The notion that crowdsourcing provided an ‘advantage’ in the original definition could be enhanced by more particular details from the grounded data. These advantageous offerings of crowdsourcing might include more specific elements such as: ‘knowledge’, ‘skills’, ‘creativity’, ‘diversity’, ‘global reach’, ‘scale’ and ‘output timeliness’ and ‘efficiency’.

Ultimately, it was suggested that the scholarly definition established by Estelles-Arolas and Gonzalez-Ladron De-Guevara in 2012 may be somewhat updated, simplified and improved, therefore, by elements of this study’s findings. A new suggested definition - taking advantage of the empirical findings would run thus:
Crowdsourcing occurs where a global, on-line open call is promulgated by an issuer to a large crowd to undertake a task or tasks mutually beneficial to all parties. The issuer may contribute financing, reward, feedback and/or appreciation and the crowd may contribute work, money, knowledge and/or experience to the task. The crowd may receive monetary reward and/or develop knowledge, skills, enhanced reputation, teamwork, creativity, community belonging and/or philanthropy. The issuer may benefit from diversity, global reach, creativity, broad skill pool, scale, lower costs, output timeliness, crowd curation and efficiency.

In addition to improving the established definition of crowdsourcing and suggesting a new one, the study also provides clarity. This clarity emerges because the study takes steps to conceptually both disentangle and position crowdsourcing in relation to related concepts like open innovation, user innovation, open source, outsourcing and collective intelligence. Crowdsourcing may be subsumed into any of these categories but can, likewise, stand alone, outside these categories. There are various mitigating forms and practices of crowdsourcing which excise it from being an exclusive sub-category of any of these related concepts.

The study also provides clarity around how crowdsourcing runs operationally. The essential characteristics and functioning of crowdsourcing as it works in crowdsourcing firms was illustrated by the study. Crowdsourcing is essentially a novel and a potentially industry-disruptive way of firms conducting business using large crowds as a basis of labour-provision and as a consumer of the firm’s products in some cases. It functions by creating value for and from all three parties of firm, client and crowd. It is a competitive/collaborative global Internet-reliant system stressing merit along with the efficiency of a task-output only focus.

10.3 Practitioner Implications

In terms of crowdsourcing, the realm of the practitioner is expansive. Crowdsourcing can appeal to different practitioner audiences. These include multinational and large business managers, smaller business owners, business service consumers and governments. Practitioners, in general can understand how business models employing crowdsourcing may improve their working landscape. The
practitioner implications are grouped in order of their importance and are highlighted below:

10.3.1 Business Models

This study has also provided useful knowledge for practitioners in relation to business models. Business models have been central to business trading and economic behaviour dating from pre-classical timelines (Teece, 2010; Zott et al., 2011) and perceived as a vital part of the business landscape (Zott & Amit, 2010). The contribution from this study is based on the real-life workings of successful firms using crowdsourcing-based business models. The value for managers from the study is that the key differentiating value drivers like crowd attraction, engagement, size and scaling attached to the crowdsourcing business model may help contribute concrete business knowledge in terms of how successful crowdsourcing firms drive business success.

Such concrete knowledge is useful to any manager wanting to implement a crowdsourcing business model or simply a crowdsourcing project within an existing firm through understanding how to rapidly increase then decrease crowd size and scale in real-time response to (short-term) work projects requiring a large injection of human resources over a day-long period or so.

Concrete knowledge around attracting and engaging crowd members through crowd-targeted-inspirational curation is also an important learning from the study. For example, this might translate to practitioner managers appealing to a crowds’ sense of fun or philanthropic impulse to quickly attract and engage large crowds. The crowd oftentimes value such elements more than simple monetary rewards. Most crowdsourcing firms closely value their crowd (they all uniformly indicated the crowd was their most valuable resource) and put time and effort to curation and developing entertainment, learning channels or online communities through which the crowd engage with the firm and each other. The attraction and engagement of a critical mass crowd is one key to designing, building and maintaining a crowdsourcing business model, and to possibly sustaining its longer term value potential.

10.3.2 Insights into crowdsourcing firm operations

A further practitioner contribution is that the study provides insight to crowdsourcing firm operations and characteristics. The study illustrates exactly how such firms operate
and their essential characteristics, which provides valuable knowledge on how value is created across global locations using remote, global and amorphous crowds. This is a novel and still-emerging business model and holds interest to firms wanting to understand how to develop new Internet based eCommerce models and the most critical issues in business model design related to crowdsourcing business models. The inner-workings of crowdsourcing businesses including specific work-flow charts as well as the essential characteristics and the inner functioning of the actual crowdsourcing firms provides detailed information valuable to business practitioners, in particular those interested in modern and contemporary firms like crowdsourcing firms. The study is at pains to uncover details such as how crowdsourcing firms use, motivate and provide benefits to their corresponding crowds – which also has potential value to practitioners who may want to utilise crowds in a crowdsourcing capacity.

A challenge to the modern manager, uncovered by the study, is maintaining contemporary knowledge of the emergence of both novel and Internet-driven business models, which are growing exponentially. Key industry business predictions by Deloitte and Accenture place crowdsourcing as a critical future business trend, of which managers need to be aware (Accenture, 2014; Shingles & Trichel, 2014). Crowdsourcing can provide particular services such as information technology or design requirements to existing businesses on a potentially cheaper, faster and better footing than traditional competing businesses.

10.3.3 Firm, supplier and customer fluidity

Another implication for managers is that value in a business may be created in close concert with suppliers and partners – in the case of crowdsourcing with the crowd itself. Against the traditional backdrop of a firm and its consumers being mutually exclusive, the implications of crowdsourcing is that new business models are being created where consumers and the firm exist in a much less mutually exclusive paradigm. This new business operational paradigm allows for significant fluidity between firm and consumer. Modern managers may surely benefit from the innovation of proactively including consumers into the process of operational work flow.
10.3.4 Customer self-service

A final implication for practitioners is the notion of significant client or consumer self-service and technological automation of e-Commerce work flows and payment models. Technology vendors and efficiency experts might take away key learnings from these highly efficient crowdsourcing firms and their self-service and automation processes. Crowdsourcing models are generally extremely efficient through the necessary requirement of crowdsourcing firms processing the productive input of sometimes millions of random crowd members from around the world, around the clock. Such firms have created operational work flows requiring extensive crowd/client self-service and/or active technological quality assurance intervention. These firms largely operate on other people’s no-/low-cost labour and automated processes to reduce costs and the requirement for large numbers of internal staff. With increasing pressure on efficiency savings and productivity gains in global businesses, many managers could potentially develop similar bottom-line enhancing systems similar to these crowdsourcing firms and/or use crowds and self-service style technological interface to effect significant improvements in productivity.

10.3.5 Potential to benefit Multinationals

In terms of multinational and large business managers, who may typically manage large departments and functions across the globe, crowdsourcing provides a means to scale up human resources in a highly efficient manner without significant cost over-runs by using pre-existing Internet, social media and crowdsourcing intermediary infrastructure. Clearly, crowdsourcing can appeal to multinational managers in terms of its potential to speed up internal processes in the business, to significantly reduce business operational costs, to speed up time to market timelines as well as to open out and potentially revolutionise the innovation landscape (Andriole, 2010; Sloane, 2011).

Some of the crowdsourcing firms in the study also speak of ‘big people’, that is in reference to the crowd, as an alternative to ‘big data’ – in response to the fact that human-devoid big data systems are not always the best fit for correctly analysing huge amounts of data. For example, computer systems are known to miss key elements in ‘big data’ analysis which (large numbers of) humans working together are more adept at finding (Simon, 2012).
Other multinationals (as well as smaller businesses) can benefit by the ability of crowdsourcing business models to tap into the market on a grander scale than usual focus groups for example. As this study illustrates, large multinational firms, such as car manufacturer Volkswagen, have used crowdsourcing to help provide feedback and create new designs, prototypes and products. Proctor and Gamble have used crowdsourcing to broaden discovery and innovation around new pharmaceuticals.

Both multinationals and smaller businesses may potentially benefit from understanding some of the elements of successful crowdsourcing as practised by the firms in the case studies. This would be the case where such businesses sought to use crowdsourcing for a single campaign or a firm routine. Businesses use crowdsourcing in a variety of ways and more innovative uses are being employed as time progresses. For example, a common way it is used includes for marketing campaigns via brand fan engagement or co-creation communities which provide valuable feedback or even help to design and build the products. Alternatively it can be used by firms to boost staff numbers on projects through enhanced and low-cost scalability, or assist in running back-end operations such as information technology departments at a lower cost. Additionally, outside of business, it can be used in community, philanthropic or government projects requiring widespread citizen engagement in largely volunteer and philanthropic roles such as identifying community safety hazards (Simon, 2012).

Business practitioners can learn from the key ‘success factors’ of crowdsourcing in the study. An example of a particular success factor included the ability to curate and motivate a large crowd through multiple ‘appeal’ channels such as monetary, philanthropy, learning and working flexibility for example. The delicate treatment of the crowd and its oftentimes fluid and organic nature requires some concomitant delicacy in response for those wishing to utilise large crowds. The study illustrated also that businesses employing crowdsourcing would be wise to use a large and diverse crowd to overcome some of the potential pitfalls of crowdsourcing such as groupthink excesses.

10.3.6 Workforce Management
Multinationals which are, no doubt, familiar with large global workforce participants in particular may be interested in the rapid expansion of sheer numbers
associated with some of the more successful crowdsourcing firms. Managing very large crowds of labour providers in global locations is a key efficiency of crowdsourcing firms.

This study has provided details of the inner workings of successful and profitable crowdsourcing firms. Most of the crowdsourcing firms in the study appear to be increasing in size and scale; and crowdsourcing industry figures illustrate that generally both firm revenues and crowd-based labour bases are growing at an exponential and rapid rate (Massolution, 2013). Examples from individual crowdsourcing firms have provided evidence for rapidly growing crowd labour bases with one participant firm doubling its crowd labour base from 7 million to 14 million during the course of the study (2011 to 2014). Crowdsourcing firms have relatively few employee staff in relation to the size of the crowds they manage.

The study posits that crowdsourcing firms can operate at highly efficient staff to crowd ratios of up to 1:100,000. The practitioner learning from the study for multinationals is a valuable lesson in crowd management efficiencies through technological, algorithmic or self-selected, self-managed crowd-serviced efficiencies.

### 10.3.7 Benefiting from new labour supply chains

Business practitioners may greatly benefit from crowdsourcing through using it to progress beyond simple outsourcing or off-shoring and thereby revolutionising traditional labour supply chains. The study provides practical details on how, where and why crowds are utilised by crowdsourcing firms and how value and benefits are created for the firm, its crowd and its clients. Managers today are under increasing pressure to uncover innovative ways of boosting productivity for and reducing financial costs. Crowdsourcing is one such novel mode of providing human resources for relatively modest outlays, particularly if the process and system is managed by a specialist crowdsourcing firm which has already incurred the sunk cost of establishing a crowd and providing an efficient, online workflow system. Crowds are not directly hired but simply provided with the task and so are completely task-focussed. So firms availing themselves of crowd labour will generally have no slack resources because they only purchase the completed end-product of which they choose the best results of the crowd labour. This situation is different to other sourcing forms of labour like
outsourcing or off-shoring, where any productivity down-times represent slack and are a cost for hiring firms.

This crowdsourcing study emphasises the crowd-based role of business service/product consumers in providing significant input to the creation of the service/product. The input service/product consumers provide as crowd members also provides them in turn with sometime monetary rewards but oftentimes other non-monetary intangibles such as being part of an actual online community of consumers - who oftentimes form their own strong identity.

10.3.8 Crowdsourcing challenges and difficulties

The study has helped to navigate a pathway through the difficulties and perceived faults of crowdsourcing, which provides practitioners with key learnings related to crowdsourcing failures or poor implementation. While the spectre of poorly executed crowdsourcing is largely absent from the case study firms, the study has prefaced its case studies with an earlier acknowledgement of some of the difficulties and shortcomings of crowdsourcing. The case study firms all practised crowdsourcing by means of a valid and successful paradigm of crowd practice. The crowds studied in the case studies appeared to have little to gain from attempting to hijack the objective of each of the crowdsourcing firms. In the case study firms, there appeared to be limited scope for irresponsible and un-credentialed crowds to wreak havoc. Crowd behaviour and performance was largely mediated through the policing actions of the firm and indeed largely through the crowd itself and/or through algorithmic mediation activity which would oust poor-performing crowd workers automatically. The spectres of both groupthink and damaging herd mentality, as may be exhibited by a crowd, was not observed in any of the case study firms. The crowds in all cases in the observed firms appeared sufficiently large to mediate such phenomena. The implication for practitioners is to be left with a sense that crowdsourcing may fail or face poor implementation where irresponsible or un-credentialed crowds are drawn in or where the firm has lacked mindfulness around timing issues in cases where controversy has engulfed a firm attempting to crowdsource.
10.3.9 Potential for crowd exploitation
A learning element for practitioners is the need to be mindful of the potential for crowd exploitation. The challenging issue of potential crowd exploitation was not ignored in the study and, while the questions directed to the crowd did not contain direct (negative) language around emotive words like ‘exploit’ or similar, the crowd was quizzed on ‘difficulties’ they may face. For example difficulties were faced by crowd workers who failed to receive payment from clients who effectively stole the work completed by the crowd member. The study also uncovered a difficult situation faced by crowd members located in developed countries who could not find local work and felt they had little choice but to work long hours and receive a subsistence-level payment via crowdsourcing. While, this raises the unpleasant spectre of exploitation, crowd members expressed gratitude for the chance to earn any money in a situation where few alternatives were available, and could ‘survive’ on the payments received. It was interesting that no crowd member explicitly mentioned the word ‘exploit’ or similar. There were also some crowd members (all located in developing countries) who earned more through (flexible and part-time) crowdsourcing than they could through local full-time employment. The study has raised the notion that practitioners still need to be aware of the emerging issues surrounding alternative forms of work encompassing crowdsourcing where crowds are global, free-wheeling and dispersed and the traditional notions around employment contracts and minimum wages remain in flux and part of an ongoing global debate centring on exploitation versus opportunity.

10.3.10 Developing country workforce management
The study provides a practitioner contribution through highlighting the rise of developing country crowds and alternative forms of workplace organisation and payment regimens. Practitioners, particularly human resources managers, are increasingly challenged with the advent of new workplace organisation modes such as the advent of remote online workers for example. Crowdsourcing represents a new mode of workplace organisation which human resource managers should be equipped for at both a practical and strategic policy level. Gaining work productivity from (lower labour cost) human resource crowds based in developing countries may be an increasing reality for developed country organisations. This is again a potential practical and
policy issue for human resource managers to be cognisant of and for which they may need to be prepared.

10.4 Limitations

10.4.1 Caution to be exercised regarding generalisability

Crowdsourcing is an emerging phenomenon which has been examined in this study through grounded, inductive qualitative methods. Given this study based its focus on case study research, this raises the question of whether the findings might be able to be generalised to a broader sample, such as firms which use crowdsourcing for single routines or even one-off projects, or even to all Internet-based eBusiness firms for example. Ultimately, however, this is still a question that can only be answered via future studies. In terms of how limited this study is in terms of generalisability, factoring elements include the detail that all the crowdsourcing firms in the study still comprise a relatively small group in a fledgling industry and the firms were all successful and growing and not facing any serious direct competition of scale at this point. This could be teamed with the fact that around two billion people are still not connected to the Internet (Kleiner, 2010) and given the dispersed, global and developing-nation focus of the crowd in crowdsourcing business models such factors will have ramifications for all crowdsourcing firms moving into the future.

10.4.2 Client stakeholder group was not formally interviewed in the study

In terms of limitations of the study, there are some areas which leave room for expanded research scholarship. One limitation of the study was that the client stakeholder group were not directly interviewed. The only exception to this was in one case where the crowd effectively operated also as the client. For the most part in the study, views pertaining to clients were gained hearsay from the opinions of both the firm and crowd groupings. Future studies could make use of crowdsourcing firm’s clients to gain first hand data relating to their experiences, knowledge and value/benefit elements of crowdsourcing.

10.4.3 All firms in the study were start-ups

Another limitation relates to the fact that in the study (almost) all crowdsourcing firms were effectively start-ups and generally less than a decade old. There was evidence, however, that during the course of the study almost all firms rapidly expanded
—particularly in terms of crowd numbers. This is a significant development in the life of any firm and for each crowdsourcing firm to be in the position where each is rapidly expanding its crowd workforce speaks to the fast-paced and changing environment in which such firms are operating.

This limitation will stand for the immediate future and provide an impediment to studying a fully matured phenomenon due to the nascence of crowdsourcing which has only developed in its modern Web 2.0 form since 2006.

10.5 Future Research

Future studies can focus on crowdsourcing as it begins to mature and evolves toward being a more stable phenomenon. Many of the firms in the case studies were (and still are) experiencing rapid, break-neck speed, with one even experiencing ‘triple digit’ growth. Such rapid growth and expansion can present challenges to researchers examining functional firm operations – whereby a degree of stability is desirable. However, despite the fact crowdsourcing is still evolving and is in flux there is still much future research which can usefully be pursued. Some avenues of future research include:

10.5.1 Delineating and developing detailed typologies of crowdsourcing and crowd usage

This study, which examines the embryonic phenomenon of crowdsourcing, helps to start a scholarly discussion and opens lines of inquiry into future scholarship on how crowdsourcing is defined and operationalised.

Future studies may be well pointed in the direction of delineating different fine-grain typologies of crowdsourcing, or organisational activities which partly or perhaps subtly use crowdsourcing. This would be best served by real-world field research. Research questions emanating from an empirical study of typologies and crowd usage, would centre on elements in relation to the differentiation (or not) of crowdsourcing from other potentially related types of crowd-utilising activities. These type of crowd-utilising activates are exemplified by those used by organisations such as Wikipedia, Amazon and Uber. These organisations obviously use crowds in various ways, such as Uber
using ‘crowds’ of willing drivers to connect with potential passengers. Such use of crowds might not conform strictly to an orthodox crowdsourcing business model \textit{per se}, although, conversely, such crowds might be related to crowdsourcing through various usage touch-points. A major question from this notion would be: Is the use of any large crowd by an organisation a form or type of crowdsourcing?

An empirical study which closely examines crowd utility would stratify crowdsourcing, provide firm direction around stronger and weaker forms of crowdsourcing and provide precision around the boundaries of crowdsourcing, and what is clear and constituted crowd usage practice.

\textbf{10.5.2 Exploring crowdsourcing as a function inside a large organisation}

It is an important distinction that this study has been selectively limited to crowdsourcing-centric firms, that is those firms whose major revenue source is gained via crowdsourcing. These firms perceive crowdsourcing as critically important because their very existence relies on crowdsourcing.

Further scholarly studies could extend the scholarship into how perhaps large firms could use crowdsourcing in a single business activity or function or a simple routine to create value. An example of this was outlined in Chapter 2 by way of multinational Volkswagen, through its new product development team, using crowdsourcing to source a radical new car design (Park, 2012). There has been little empirical research in this area and much of the casual-use crowdsourcing-related successes in large firms are self-reported.

It is unclear at this stage, where crowdsourcing is not being used as an existential underpinning of the firm’s entire business model, whether the grounded data frameworks would equally apply to a firm which simply runs a one-off crowdsourcing campaign or uses it occasionally inside an operation such as marketing or product development. Future exploratory research is required to empirically analyse research questions centring on whether crowdsourcing adds value when it is used in a more casual manner and whether large firms perceive potential value benefits from its casual use.
10.5.3 Exploring crowdsourcing links to developing countries, firm-crowd relationships and legal issues

Future research could also be focussed more specifically on the firm and crowd relationship. Exploration of elements such as trust, exploitation, the psychological contract and social exchange theory for example might be fruitful avenues for prospective research.

Issues particularly related to crowd relationship raise potential research questions such as: What precisely is the right size in terms of number and the composition of a crowd in relation to crowdsourcing? Does a firm-crowd relationship need to be curated or will the potential moderating effect of (increasing) potential payment be simply enough to attract and grow a crowd? Is the Psychological Contract relevant to the crowd and firm relationship in crowdsourcing scenarios? Is trust between crowd and firm an important element in establishing and maintaining successful crowdsourcing projects? How widespread (or not) is the spectre of exploitation of crowds in crowdsourcing?

In addition to crowd relationship issues, ‘bottom of the pyramid’ developing world population issues coupled with opportunities for employment that crowdsourcing promises may be a useful focus for upcoming researchers. Quantitative, survey-based research could fruitfully address a research question such as: Is there evidence that developed-country-crowds are diminishing in response to the moderating effect of increasing numbers of potential new crowd members accessing the Internet in developing countries and signing on as crowd members?

In addition, legal and contractual issues and challenges tied to crowdsourcing are already developing (Shaw, 2013) and will possibly provide much research potential. A possible research question which could be addressed through future quantitative research might be: Are global-encompassing employment contracts, intellectual property and working conditions being moderated by the rise of crowd-based work attracting burgeoning crowds from developing countries?

10.5.4 Developing the business model activity system

Zott et al. (2011) called for future research using the business model as a unit of analysis particularly related to value creation. This study was one that responded to this call but there is still much potential for future business model focussed research. There
is, no doubt, much that is unknown and yet to be discovered regarding business models which will provide future scholars with burgeoning opportunity to explore and expand the bounds of knowledge in this arena.

With regard crowdsourcing, a fruitful area of research would focus attention on wider aspects of its genesis as a business model. Chapter 2 contained information about related forms of crowdsourcing, for example crowdfunding and crowd-shipping. A good new line of new research might pursue lines of inquiry around these other related forms of crowdsourcing like crowdfunding or crowd-shipping using a business model unit of analysis. A pertinent research question could explore whether crowdfunding or crowd-shipping functionally operate as business models, and what are the important elements of each entity’s business activity system to its business model value creation potential.

10.6 Concluding Remarks

To echo Afuah and Tucci (2012) the exciting phenomenon of crowdsourcing opens a broad pathway over the coming years for the development of both rich theoretical and empirical knowledge via scholarly activity. Crowdsourcing opens a very fertile avenue of research pointed to developing ideas around newer forms and types of work, crowd labour relations, innovative ways of structuring and doing business, strategy, business model design, stakeholder engagement and a renewed focus on global and diverse workforce management.

This thesis has provided nuances on the definition of crowdsourcing, suggested a definition and provided delineation from other commonly related frameworks like co-creation and open/ user innovation. In addition the thesis has addressed the puzzling aspects of crowdsourcing, such as the burgeoning attraction of the large but imprecise and unformed crowd resource, which cannot wholly be explained by existing traditional value creation theories, such as TCE, RBV, DCE and Schumpeterian innovation – which are also limited by their focus on firm-centric value creation. The thesis has provided empirical findings in relation to outside-the-firm value creation to build and
extend the ‘consumer perspective’ (Priem et al., 2013) via the novel injection of such ‘consumer perspective’ functioning both upstream (producer-level) and downstream (demand-level) simultaneously in crowdsourcing firms. Furthermore the thesis has provided empirical findings to support that crowdsourcing can function as a value creation system as a business model (Priem et al., 2013) and has unique value creation elements related to the business model activity system established by Zott and Amit (2010).

Crowdsourcing will, no doubt, continue to develop, grow and evolve. Crowdsourcing firms, many of which have experienced explosive crowd growth and already attract multiple millions of crowd members, will likely continue to see unprecedented growth of crowds as more of the population of the world becomes connected to Web 2.0 global networks. The value of crowdsourcing, therefore, promises as much in the future as it does in the present.
11. REFERENCES


CrowdFlower (2014). *We collect, clean and label data: The leading people-powered data enrichment platform.* Retrieved at http://www.crowdflower.com/


Crowdsourcing Executives

Name of organisation: ______________________________________________________

Name of respondent & position: _____________________________________________

Contact (email): __________________________________________________________

Address: __________________________________________________________________

Interview guide for the qualitative study: unstructured interviews

1) Company background (Historical background, missions and goals, corporate culture, number of employees etc.).
   - When established? ____________________________________________________
   - Main goal/type of company? ____________________________________________
   - Is it privately held company? __________________________________________
   - A start-up? __________________________________________________________
   - No. of employees? ____________________________________________________
   - No. of clients? ________________________________________________________
   - No. of crowdsourced resources if known?_______________________________

2) How does using crowdsourcing create value for your organisation?

3) In what ways does the company create value for its own stakeholders (this can be for clients as well as crowdsourced staff)?

4) Why did you choose a crowdsourcing approach?

5) How did you go about choosing a crowdsourcing based business model out of other models you could have chosen?
6) What is the company’s operations strategy in dealing with the changing business environment?

7) Are there companies with whom you are in direct competition?

8) How does the company communicate with its main stakeholders – particularly those who form the crowd?

9) Has the company encountered difficulties with communication with its crowd in particular? Eg. Is there high turnover? Quality problems?

10) How does the company attract a crowd? Ie. Do you do anything special to engage/attract them?

11) How would you characterise your company’s crowd? Eg educated, creative, young, from developing economies, tech-savvy etc.

12) How does the company define its core capabilities? Eg. Innovative, Tech-savvy, flexible

13) What does this company consider to be the most important capability and how does the crowd fit in (if at all) to this important capability?

14) What would the company consider its most valuable resource(s)?

15) Do you think your crowd creates any sort of competitive advantage for your company over competitors?

16) Do see crowdsourcing as primarily a business model, a company capability, a company resource or a form of communication?

17) What is the future outlook for the company?
APPENDIX B: CROWD CROWDSOURCING INTERVIEW QUESTIONS

The University of Melbourne
Qualitative Survey – Crowdsourcing

Before you commence please read and sign the final page Consent form
Email completed survey to k.wilson10@student.unimelb.edu.au

1. How did you come to do crowdsourcing work? How did you find out about it?

2. What motivates you to be part of a crowd labor workforce? Is it money or other things?

3. Are there times when you participate in crowd-working but do not get paid or maybe get paid a low rate and how do you feel about this?

4. What types of crowd-working tasks do you typically perform and how often?

5. Do you develop any special relationship with the people you work for and would you say you trusted them?
6. Do you consider crowd-work a long-term career option?

7. What keeps you coming back to participate in crowd-work?

8. Is crowd-working ever fun and/or does it make you feel special in any way?

9. Do you consider the crowd-work you do to be unfair in any way? Or any difficulties you have found?

10. Any other thoughts?

11. What is your gender? Male Female

12. What is your age? __________________________

13. What is your current country of residence?
__________________________________

14. Optional: also please leave a contact email so I can contact you to clarify or check something or do a follow-up._______________________________________

Email completed forms to k.wilson10@student.unimelb.edu.au
APPENDIX C: CROWD CROWDSOURCING QUALITATIVE SURVEY

The University of Melbourne
Qualitative Survey – Crowdsourcing

Before you commence please read and sign the final page Consent form
Email completed survey to k.wilson10@student.unimelb.edu.au

1. How did you come to do crowdsourcing work? How did you find out about it?

2. What motivates you to be part of a crowd labor workforce? Is it money or other things?

3. Are there times when you participate in crowd-working but do not get paid or maybe get paid a low rate and how do you feel about this?

4. What types of crowd-working tasks do you typically perform and how often?

5. Do you develop any special relationship with the people you work for and would you say you trusted them?
6. Do you consider crowd-work a long-term career option?

7. What keeps you coming back to participate in crowd-work?

8. Is crowd-working ever fun and/or does it make you feel special in any way?

9. Do you consider the crowd-work you do to be unfair in any way? Or any difficulties you have found?

10. Any other thoughts?

11. What is your gender? Male Female

12. What is your age? __________________________

13. What is your current country of residence? _____________________________

14. Optional: also please leave a contact email so I can contact you to clarify or check something or do a follow-up. ________________________________

*Email completed forms to k.wilson10@student.unimelb.edu.au*
Dear Sir/Madam,

I invite you to participate in an interview to examine how value is created in crowdsourcing. You will be participating in research that forms part of my PhD thesis being supervised and funded through the Department of Management and Marketing at the University of Melbourne, Australia. This project is being supervised by Professor Daniel Samson and Dr Vikram Bhakoo. This research has been approved by The University of Melbourne’s Human Research Ethics Committee.

The main purpose of the study is to explore the how value is created by the use of crowdsourcing. Your participation is very important to this new research and will add rich insights to crowdsourcing - which is still a very new phenomenon. As a result of this research I expect to be able to discover new information about how crowdsourcing works to create value.

We are conducting a large scale survey to provide valuable insights into crowdsourcing and would like to invite you to participate in this survey. Should you agree to participate, you will be required to fill in the attached questionnaire. This questionnaire should take approximately 20 minutes to complete, and seeks your opinions on crowdsourcing as you experience it. The information provided by you will help us to understand how crowdsourcing works and adds value.

I intend to protect your anonymity and the confidentiality to the fullest extent within the limits of law. However, it should be noted that this project could involve a small sample size and as such it may be difficult to disguise the source of the information. Your name, contact details, and company name will not be mentioned in the final research report and will be kept in separate password-protected computer file from any data that you supply. Any references to personal information that might allow someone to guess your identity will be removed and you will be referred by a pseudonym. It is also possible that the results of the research will be presented at academic conferences or seminars. The data will be kept securely in the Department of Management and Marketing for five years from the date of publication and then destroyed.

Should you wish to withdraw at any stage, or to withdraw any unprocessed data you have supplied, you are free to do so without prejudice. Should you require more information, or have any issues, please contact me on +61 3 9035 5889 or email me at k.wilson10@pgrad.unimelb.edu.au. Alternatively, you may wish to contact Professor Daniel Samson on +61 3 8344 5344 or email at d.samson@unimelb.edu.au.

Should you be concerned about the conduct of the project you are welcome to contact the Executive Officer, Human Research Ethics, The University of Melbourne on +61 3 8344 2073.

It is important that you know that your contributions and opinions will be of great value to this research. Thank you in advance for your assistance on this research project.

Yours sincerely

Kathy Wilson

HREC 1238505.1 21 March 2012 QUALITATIVE SURVEY
CONSENT TO PARTICIPATE IN RESEARCH

“Crowdsourcing and the organisation: How is value created?”

You are invited to participate in a research study conducted by Professor Daniel Samson, Dr Vikram Bhakoo and Ms Kathleen Wilson of the Department of Management and Marketing, The University of Melbourne, Australia.

The main purpose of this study is to explore the ways that value is created using crowdsourcing. As a result of this research it is expected that we will be able to discover new information about how value is created through crowdsourcing.

We are conducting a large scale survey to provide valuable insights into crowdsourcing and would like to invite you to participate in this survey. Should you agree to participate, you will be required to fill in the attached questionnaire. This questionnaire should take approximately 20 minutes to complete, and seeks your opinions on different outsourcing practices in our organization. The information provided by you will help us to understand and identify different contract characteristics, contextual factors and their influence on outcome.

I intend to protect your anonymity and the confidentiality to the fullest extent within the limits of law. However, it should be noted that this project could involve a small sample size and as such it may be difficult to disguise the source of the information. Your name, contact details, and company name will not be mentioned in the final research report and will be kept in separate password-protected computer file from any data that you supply. Any references to personal information that might allow someone to guess your identity will be removed and you will be referred by a pseudonym. It is also possible that the results of the research will be presented at academic conferences or seminars. The data will be kept securely in the Department of Management and Marketing for five years from the date of publication and then destroyed.

Please be advised that your participation in this survey is voluntary. Should you wish to withdraw at any stage, or to withdraw any unprocessed data you have supplied, you are free to do so without prejudice.

Should you require more information, or have any issues, please contact me on +61 3 9035 5889 or email me at k.wilson10@pgrad.unimelb.edu.au. Alternatively, you may wish to contact Professor Daniel Samson on +61 3 8344 5344 or email at d.samson@unimelb.edu.au. Should you be concerned about the conduct of the project you are welcome to contact the Executive Officer, Human Research Ethics, The University of Melbourne on +61 3 8344 2073.

I__________________________________________________________ (name of participant)
understand the procedures described above and agree to participate in this study.

______________________________     ______________
Signature of participant        Date
APPENDIX F: MANAGEMENT ARTICLES ON CROWDSOURCING CASE STUDIES

MIT Sloan Management Review (10)

1. Online Reputation Systems: How to Design One That Does What You Need
2. Decisions 2.0: the Power of Collective Intelligence
4. The Executives Role in Social Business
5. Social Business: Shifting Out of First Gear
7. The Collective Intelligence Genome
8. Creating Employee Networks That Deliver Open Innovation
Whelan, Eoin; Parise, Salvatore; de Valk, Jasper; Aalbers, Rick. MIT Sloan Management Review 53.1 (Fall 2011): 37-44.
9. Spurring Innovation Through Competitions
10. Experiments in Open Innovation at Harvard Medical School
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APPENDIX G: GOOGLE IMAGE ANALYSIS

A total of 801 Google publicly-sourced images using the search term ‘crowdsourcing’ were analysed and open-coded into five categories including informational, explanatory, symbolic (crowd), problematised and depictions of collective intelligence.

The first category to emerge from the open coding was labelled ‘informational’. Informational images of crowdsourcing would typically advertise a book or website, a crowdsourcing-themed event or a particular subset of crowdsourcing practice such as crowdfunding. An example of informational image of crowdsourcing is:

![Crowdsourcing Week Logo](https://www.google.com.au/search?q=the+power+of+crowdsourcing&rlz=1C1CHMO_en-GBAU535AU535&espv=2&biw=1920&bih=935&source=lnms&tbm=isch&sa=X&ved=0CAcQ_AUoAmoVChMIw_i2pZTk4AI4RVumCh0M6gvk&ischqb=tbn:is&tbm=isch&q=crowdsourcing+week&imgrc=5aC9Jzydlcrw0M%3A

The second open-coded category to emerge was ‘explanatory’. Explanatory images of crowdsourcing made attempts to define and describe crowdsourcing and typically included diagrams, charts, literary content and pictures used to explain the component attributes of crowdsourcing. An example of the explanatory image of crowdsourcing is:


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The third category was ‘symbolic’. This category in almost all cases depicted simple images of a crowd, without further embellishments. An example of this category is contained in the following image:

The fourth open-coded category of the 801 images was labelled ‘problematisation’. This category depicted notions that crowdsourcing brought challenging issues and problems and were largely affectively negative depictions. An example of crowdsourcing image problematisation includes:


The final category was ‘collective intelligence’. It included various depictions of collective intelligence – a companion attribute of crowdsourcing.


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Details are summarised below to exhibit respectively the figures and the percentage share of each category in the entire collection of 801 images.

**Categories of crowdsourcing images from the total Google image population**

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informational</td>
<td>417</td>
<td>52%</td>
</tr>
<tr>
<td>Explanatory</td>
<td>232</td>
<td>29%</td>
</tr>
<tr>
<td>Symbol (Crowd)</td>
<td>79</td>
<td>10%</td>
</tr>
<tr>
<td>Problematisation</td>
<td>49</td>
<td>6%</td>
</tr>
<tr>
<td>Collective Intelligence</td>
<td>24</td>
<td>3%</td>
</tr>
</tbody>
</table>

Source: Google images database, 2011

In conclusion, the initial impression-forming stage of crowdsourcing could be established with the view that crowdsourcing is a phenomenon gaining steady public interest over time and its image depiction is mainly affect-neutral. This means that connotations of crowdsourcing being negative or exploitative only figure in a relatively minor sense in public image renditions or interpretations of it.

Those members of the self-styled expert public who have felt compelled to post images about crowdsourcing tend to overwhelmingly want to provide simple information about it or attempt to explain it. This is not really surprising due to its nascence as a phenomenon.

The symbolic representations tended to incorporate the notion of the crowd symbolised by 'people' images and depictions of the world globe and/or a computer. The recipient of the crowd offering was sometimes represented by a lone person - clearly representing the firm or the client of crowdsourcing.
Author/s:
WILSON, KATHLEEN

Title:
Every crowd has its silver lining: how crowdsourcing is conceived, practised and how it
creates value

Date:
2015

Persistent Link:
http://hdl.handle.net/11343/56425

File Description:
Every crowd has its silver lining: How crowdsourcing is conceived, practised and how it
creates value