urban manufacturing project

THE DILEMMA OF URBAN EMPLOYMENT LAND

An Inquiry into the Viability of Small Urban Manufacturing in Inner Melbourne

Phase 2 Report
05 March 2018

A partnership project

Inner Melbourne Action Plan
Making Melbourne More Liveable

Victorian Planning Authority
Moreland City Council
The University of Melbourne
City of Melbourne
City of Port Phillip
City of Stonnington
City of Yarra
Maribyrnong City Council

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This report has been prepared by a team of researchers and professionals from the partner organisations and the University of Melbourne. The lead authors are Dr. Jennifer Day and Mr. Simon Carter from the University of Melbourne, and Ms. Virginia Miller from the City of Port Phillip. Mr. Zheng Chin, Ms. Jane Archer, Ms. Targol Khorram, Mr. Sumkhuu Yadam, Ms. Anna Rowe, Ms. Cherie Josephson, and Ms. Vivian Tan – former students at Melbourne University – all made significant contributions, each leading one of the research studies upon which this report draws. Mr. Chin was the primary author of Chapter 2. Mr. Yiriy Onyshchuk from the City of Melbourne and Mr. Austin Ley from Planning for Change also made contributions – particularly in the knowledge compiled and writing about the adaptation of the findings to the local policy context. Mr. Lu Fan and Mr. Justin Malkiewicz assisted with analysis of existing data sources. Mr. Bryn Davies and Mr. Marcus Spiller provided some of the foundational ideas for the project.

The Project Management Team consists of:

Jennifer Day, The University of Melbourne
Ray Tiernan, City of Port Phillip
Elissa McElroy, City of Stonnington, IMAP Executive Officer
Maria-Luisa Nardella, Moreland City Council

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ONE-PAGE SUMMARY

The goal of this study is to deliver policy-relevant findings that can guide the Inner Melbourne Action Plan (IMAP) councils in making strategic decisions about the use of land with regards industrial, commercial, and residential purposes. Phase 2 consists of five qualitative studies examining maker identity, innovation, placemaking, organisation and analysis of primary and secondary data to:

- understand employment
- networking and innovation patterns
- spatial distribution of small making activity in the study area
- review the international evidence about the impacts of public policy relevant for small urban makers
- work with the Policy Reference Group to apply the evidence compiled and develop policy recommendations for the IMAP and Moreland areas.

This report is organised into four parts:

Part I. Objectives and Background
Part II. The Story in the Data
Part III. The Qualitative Experience of Making in Melbourne
Part IV. The Policy Environment.

What is an urban maker, and what is an urban manufacturer? Our makers:

- *identify as both "makers" and "manufacturers"*
- *have strong associations with, and derive Identity from, their host communities*
- *do not appear to take advantage of traditional concerns of location, e.g., labor, supplier, or customer access*
- *do not aspire to mass production*
- *are not strong innovators*
- *distrust associations but link through informal networks*
- *do not generally engage in sharing economies*
- *are not politically organised or networked.*

Key Quantitative Findings.

- ***There is a critical mass of small making in Melbourne:***
  - 20,356 small making firms
  - 64,935 jobs
  - 83 % employ five or fewer people.
- ***Maker identity is physical, digital, and service-oriented.***
- ***Makers struggle to classify themselves*** – instead opting for the "other" classification.
- ***Space and redevelopment pressures could threaten the making base.***
  → 10,584 firms may be seriously considering leaving IMAP+Moreland (33,766 jobs)
  → 2,646 firms may be seriously considering leaving the Melbourne Metro area (8,441 jobs)
  → 1,629 firms may be seriously considering leaving Victoria (5,195 jobs).
- ***Traditional manufacturing is a small proportion of firms.*** Most identify first as service firms.

Key Policy Findings.

- Melbourne's current policy climate lags behind that of peer cities like Berlin, Vancouver and Amsterdam in its current approach to urban manufacturing. Suitable data for comprehensive economic analysis appears to be more available in these cities.
- Locally, there is not much evidence that state or federal policies support makers.
- Local governments are taking the lead in supporting makers.

EXECUTIVE SUMMARY

Background

The University of Melbourne in partnership with IMAP, Moreland City Council and the Victorian Planning Authority undertook research titled, "The Dilemma of Urban Employment Land: An Inquiry into the Viability of Small Urban Manufacturing in Inner Melbourne."

Our over-arching hypothesis is that small, high-value added, highly-innovative urban manufacturers in Melbourne can benefit significantly from the agglomeration economies associated with inner-urban locations and there is value to the urban economy in preserving a place for manufacturing innovators in the central city and immediate inner suburban areas.

Across the two phases of this study, we have assembled a picture of maker identity and aspiration, concluding that these firms often have very different aspirations than their scale-manufacturing counterparts.

We have done this using data from five qualitative studies. We also supplement the data with other stories from our extended case study of makers in a variety of forums over the past two years – workshops, informal site visits, participating with makers in Melbourne Knowledge Week and other events. The composite provides us with some understanding of who Melbourne's makers are and what they want.

The challenge is an absence of a robust evidence base to enable local governments to argue for retention of industrial areas in strategic locations. It is in generating this evidence base that this project adds value. We take a multi-faceted approach designed to address several dimensions of the urban employment problem:

1. **The land approach** (understand how employment land in inner Melbourne is currently being used)
2. **The sector approach** (understand the value of central locations for businesses in the small manufacturing sector)
3. **The economic approach** (Understand the economic impacts and contributions of small urban manufacturers (the economic approach)

Phase 1

The Urban Manufacturing Project has delivered the *Phase 1 Report*, which was been accepted and endorsed by IMAP at its November 2015 Implementation Committee meeting. The full report is available at:

http://imap.vic.gov.au/uploads/Meeting%20Agendas/2016%20February/Att%2010_Action%207.2%20Urban%20Manufacturing_IMAP%2026%20Feb%202016.pdf.

Project Objectives

This report describes the combined outcomes of Phases 1 and 2, with a focus on Phase 2.

Phase 2 objectives:

1. To enumerate the economic impacts of Making Sector (if possible) using ABR data and proprietary data sets (CLUE, Council data, State Government data, Workcover).
2. To generate a dataset of making firms in the IMAP and Moreland study areas.
3. To use this dataset to understand economic activity, networking and innovation patterns, and spatial distribution of small making activity in the study area.
4. To develop a qualitative understanding of location, innovation and other sector impacts.
5. To review maker identity, including ANZSIC codes and their appropriateness for small makers.
6. To review international evidence about the impacts of and policy levers relevant for small urban makers
7. To work with a Policy Reference Group to apply the evidence compiled and develop policy recommendations for the IMAP and Moreland areas.

**As we describe in Section 4 of this report, the actions outlined in Objective 1 have been unachievable because of data-availability problems. The other objectives are achieved or are in-progress, and we report on these in this report.*

Activities

Phase 2 consists of three additional qualitative studies and related quantitative queries generated from the dataset generated from the project's makers.melbourne website.

We reviewed international evidence about the impacts of public policy relevant for small urban makers.

Additionally, we engaged a Policy Reference Group (PRG) to convert our findings into policy actions that are realistic and implementable in local and state government contexts.

Key Qualitative Findings: What is a Maker?

No clear definition of a maker emerges from our inquiries. It is an evolving sector with variation and diversity.

The qualitative studies we developed were intended to tell us about the economic features of Melbourne's makers – about their patterns of networking, service orientation, and innovation. In addition, the findings provide us with a sense of the makers' identity – this is as entwined with the city as it is with any economic aspiration. Makers are – in identity and function – intertwined with the city that houses them.

Our research strongly suggests that a "new," service(ized), high value-added, knowledge-intensive production sector is emerging in Melbourne that inverts the historic relation between manufacturing and services.

We further conclude that some makers are driven by more-than-economic concerns and that understanding them involves going outside of the modes of common thought in urban planning and economic geography.

Major features of this sector are:

1. Terms like “making” and “manufacturing” are often used interchangeably but there is often a distinction.
    a. “Makers” tend to be small and have minimal aspiration to expand to mass production.
    b. “Manufacturers” tend to aspire to one or both of those features.
2. Very minimal focus by makers on economies of scale or mass production
3. A strong focus on craft skill and teaching those skills to new generations of artisans
4. Difficulty among makers in identifying with a particular sector or ANZSIC code
5. Adding value to made products through high levels of service and educational programming
6. A strong focus on location in urban centres and inner suburbs as a core feature of their firm identity
7. A possibility that owners would choose firm closure over outward relocation
8. Evidence that central location facilitates customer and supplier relationships but not peer networking or networked innovation
9. Evidence of firm agglomeration economies and knowledge sharing but stronger evidence that spatial proximity to other like firms is not used for growth and networking
10. Firms face strong displacement pressures and are concerned about their futures in Melbourne’s central urban areas
11. The sector lacks leadership and organisation. No leaders have emerged as they have in other cities with vibrant making communities such as Portland, London, Detroit and Berlin.

We cannot provide a succinct and definitive set of criteria that can conclusively identify makers.

The study results so far do not provide conclusive criteria such as firm size, ANZSIC code or other features that can be useful in identifying firms and targeting them for future study.

Makers in the study area are more distinguished by the ways in which they engage with their city and depart from the traditional aspirations of manufacturing.

We also studied the impacts of government initiatives involving makers on their host communities. A case study of *Docklands Spaces*, a program that facilitated creative pop-ups in Melbourne, was undertaken. Interviews with Docklands residents were conducted in order to determine what impact *Docklands Spaces* had on local resident’s sense of place. The findings suggest that place making via creative pop-ups does not always lead to the creation of vibrant communities or ‘places’. In fact, despite positive intentions, it seems pop-up creative programs have very limited impact on resident’s sense of place. These findings are significant as they question the current place making praxis which positions all temporariness as positive.

Key Quantitative Findings: A Critical Mass of Makers

The review of existing data reveals that all researcher-available datasets are inadequate to understand the economic contributions, spatial arrangement, quantum and other relevant features of the Urban Manufacturing sectors.
Some conclusions can be drawn from existing data. The report contained herein first presents the story told by the available secondary data and a survey we conducted on urban manufacturers. The quantitative findings suggest the following:

There is a critical mass of small making in Melbourne. We estimate that within the study area there are:

- 20,356 small making firms
- 64,935 associated jobs
- 65 % have 1-2 employees
- 83 % have five or fewer employees

Maker identity is physical, digital, and service-oriented. There is some contention among planners and scholars about whether service-focused businesses that design virtual images and products should be included in the making category.

The "other" category is strongly and disproportionately represented among makers, suggesting difficulty in categorisation of the firm in a manufacturing-focused ANZSIC.

- 14 % of the survey respondents opted for the "other" classification

This concords with our qualitative findings that makers see their businesses as involved in a variety of virtual and physical making with commensurate support and retail services. A theme that emerges throughout this work is the strong identity that makers experience and an associated difficulty in self-classification. This comes through in this data as well as in our qualitative work in Part III.

A majority of firms appearing in the ABR data are located in the various residential zones. Of the 43,670 firms registered across the IMAP+Moreland study area (excluding the port), 22,741 are located in General Residential or Neighbourhood Residential zones.

Space and redevelopment pressures could threaten the making base.

- 10,584 firms may be seriously considering leaving IMAP+Moreland (33,766 jobs)
- 2,646 firms may be seriously considering leaving the Melbourne Metro area (8,441 jobs)
- 1,629 firms may be seriously considering leaving Victoria (5,195 jobs).

Small firms looking to expand their operations are the kinds of firms that most council planners would like to keep in their jurisdictions and would like to avoid dislocating jobs with redevelopment pressures. This suggests that the small maker community is worth considering in policy – particularly in areas of production space, labour, leasing conditions and rents.

Traditional manufacturing is a small proportion of firms. Most making firms are not manufacturers. Only four of the top 33 ANZSIC codes are actual manufacturers – that is, listed in the set of manufacturing ANZSIC codes. Most are service firms, with 8,427 jobs in the Computer System Design and Related Services category. Moreland council differs from its peer councils in the study in that it has a strong representation in all four of these traditional manufacturing categories.

Key Policy Findings

The international policy review suggests that Melbourne lags behind peer cities like Berlin, Vancouver and Amsterdam in its approach to urban manufacturing.

- Suitable data for comprehensive economic analysis appears to be more available in these cities and publicly funded.
- Cooperation and partnerships with makers are a matter of policy and public support in Amsterdam and Berlin.
- London is proposing protecting industrial lands through urban policy.

- In 1995 Vancouver committed to "retain most of the City's existing industrial land base for industry and service businesses."

These cities, in turn, have lively, thriving and internationally-recognised urban manufacturing sectors.

The success of these peer cities and the difference in policy climates does raise questions about whether Melbourne's land policies are to blame for urban making firms with insecure stakes in their places of production, unconvincing networking histories, minimal innovation and no apparent interest in organising. Locally there is not much evidence that state or federal policies support makers. Local governments are taking the lead in supporting makers by developing local policies.

Future Work

There is still much work to be done to understand the making sectors and their contributions to local, state, and national economies. Research Streams to consider:

1. Impacts of Makers on Economic Development – What are the broader benefits to the city of a successful urban manufacturing sector and what future commercial space is required for survival of these firms?
2. Composition of and Influences on the Making Sectors – what is currently happening in industrial/commercial-zoned land and what does the sector require to prosper?
3. Leadership, gender, and isolation among makers:
    a. why Melbourne's making community has not generated leadership that can effectively lobby government, as has emerged in other cities?
    b. is making is a gendered activity?
    c. Analysis of feelings of isolation experienced by people undertaking home-based making activities in outer suburban areas
    d. the role of local government in supporting makers in outer suburban Melbourne.

1. INTRODUCTION

This report provides the final findings of Phase 2 of the Urban Manufacturing project – a study of small, urban makers in Melbourne's core suburbs. The University of Melbourne partnered for this study with the Inner Melbourne Action Plan (IMAP), Moreland City Council, and the Victorian Planning Authority.

The core goal of this study was and is to deliver policy-relevant findings that can guide the local councils and state governments in making strategic decisions about the use of employment land in the IMAP area, with regards to allocating land to industrial, commercial, and residential purposes.

In this three-year study, we have assembled a picture of maker identity and aspiration, concluding that the "new" manufacturing firms often have very different aspirations than their scale-manufacturing counterparts. We have done this using data from a series of qualitative studies, a large-scale data collection, deep engagement with the making community, a comprehensive review of available data sources, and a comprehensive review of local and international policy.

We then took these findings and submit them to the review and scrutiny of a Policy Reference Group (PRG), whose task it was to translate our findings to actionable policy recommendations for Melbourne and Victoria.

Right now, as part of the review and implementation of *Plan Melbourne*, urban policy is being formed and implemented in the Melbourne Region that will directly impact the capacity of urban manufacturers to remain in central locations. The Premier of Victoria, Hon. Daniel Andrews, has commented on the issue of preserving industrial land in the inner Melbourne region:

> I've heard people say Victorian manufacturing is disappearing. It's simply not true. Victorian manufacturing is a $26 billion industry employing more than 283,000 men and women – making it one of the state's largest suppliers of full-time jobs. Of course, Victorian manufacturing is going through a transition – moving away from being a sector dominated by automotive manufacturing towards a more diverse mix of industries ranging from food to aviation, biotech to construction. The point is this: Victorian manufacturing is not disappearing, but it is changing (DEDJTR, 2017, p. 1).

Our research strongly suggests that a "new," servicised, high value-added, knowledge-intensive production sector is emerging in Melbourne that challenges the historic relation between manufacturing and services, the traditional roles of government and urban planning, the authority of peak bodies, and the applicability of basic tracking tools such as the Australian and New Zealand Standard Industrial Classification (ANZSIC) system. This suggests that new ways of thinking about small makers may be both necessary and warranted if we are to support this emerging and vibrant sector.

Supporting this sector will be the charge of local and state governments and peak bodies who may at the moment not be equipped for the task. Of eight peak bodies represented in interviews, only two were aware of the making sector, and only one thinks itself to be equipped to represent a constituency of maker members. This is despite our estimate of 18,589 small making firms and 59,307 jobs in the Melbourne metropolitan area. Most of these firms are small: 83 percent employ five or fewer people.

PART I. OBJECTIVES AND BACKGROUND

2. PROJECT BACKGROUND

This section provides a background on both phases of the Urban Manufacturing Project, Phase 1 and Phase 2. We note repetition with *Phase 1 Report* where applicable.

2.1 PHASE 2 OBJECTIVES

1. To enumerate the economic impacts of Making Sector (if possible) using ABR data and proprietary data sets (CLUE, Council data, State Government data, Workcover).
2. To generate a dataset of making firms in the IMAP and Moreland study areas.
3. To use this dataset to understand economic activity, networking and innovation patterns, and spatial distribution of small making activity in the study area.
4. To develop a qualitative understanding of location, innovation and other sector impacts.
5. To review maker identity, including ANZSIC codes and their appropriateness for small makers.
6. To review international evidence about the impacts of and policy levers relevant for small urban makers
7. To work with a Policy Reference Group to apply the evidence compiled and develop policy recommendations for the IMAP and Moreland areas.

We report on these objectives for the study area shown in Figure 2.1.

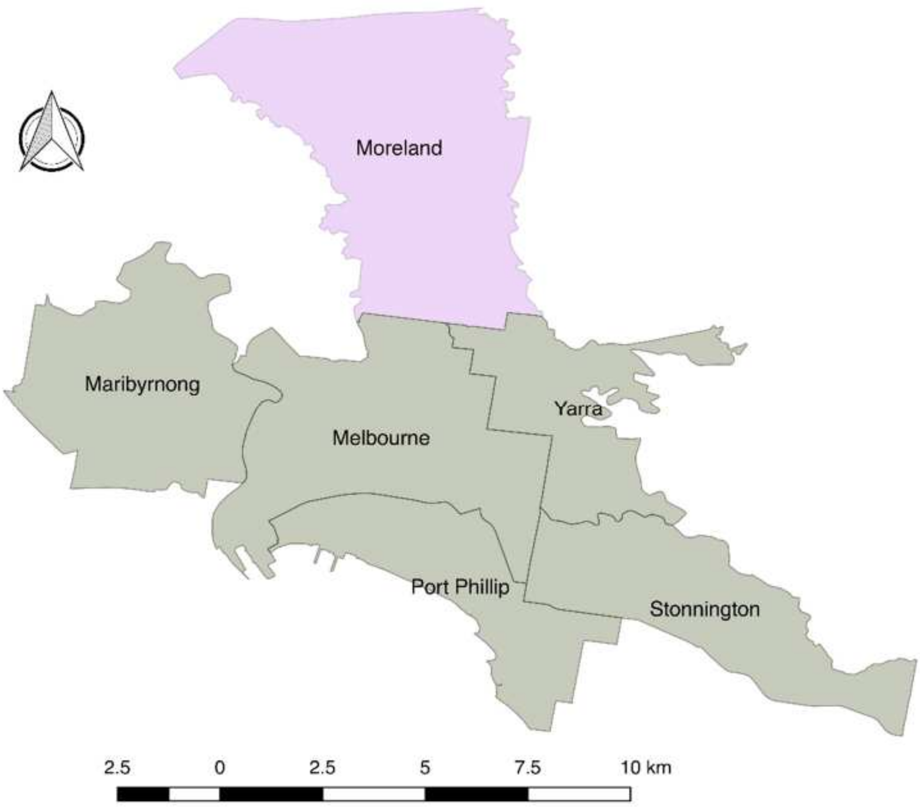

Figure 2.1. IMAP+Moreland Study Area

2.2 PHASE 2 ACTIVITIES

Phase 2 activities included:

1. Six qualitative studies examining maker identity, innovation, and placemaking;
2. Primary data collection and analysis of this data to understand economic activity, networking and innovation patterns, and spatial distribution of small making activity in the study area;
3. Review of international evidence about the impacts of and policy levers relevant for small urban makers;
4. Work with Policy Reference Group to apply the evidence compiled and develop policy recommendations for the IMAP and Moreland areas.

The qualitative studies undertaken:

Creative clusters in Yarra. Exploring whether small making firms in the Cremorne and Gipps Street precincts exhibit clustering behaviour.

Finding: that aside from proximity, making firms are not leveraging their location for other clustering-related benefits.

Understanding Servicisation using a Qualitative Storytelling Approach. Understanding how urban makers use services to innovate and create identity for their products.

Finding: that service is a significant component of some makers' business but not all.

Understanding the Networking Characteristics of Innovation in Melbourne's Boutique Furniture Sector. Understanding whether small furniture makers in the IMAP area exhibit features of networked innovation.

Finding: is that they do not.

Assessing the Short-term Placemaking Effects of Makers. Examining whether a concentration of makers in the Docklands contributed to a sense of place among residents.

Finding: no effect on placemaking was discernible. Docklands residents do not see their community as a place.

What Makes a Maker? Querying why makers use certain words to describe themselves to reveal their understanding of "making" versus "manufacturing" and their aspirations.

Conclusion: that the "new" manufacturing firms often have very different aspirations than their scale-manufacturing counterparts.

Why aren't makers organised? Querying why makers do not appear to organise, do not attend business development events nor have recognisable leadership as a group.

Finding: makers participate in informal networks; have common conflicts yet seem to lack a collective identity. Without a collective identity they will struggle to become organised.

2.3 THE POLICY REFERENCE GROUP

A Policy Reference Group (PRG) was established at the beginning of Phase 2 to advise the Steering Committee on the policy recommendations that are most appropriate given the research findings and the current governance climate in Melbourne.

The PRG is comprised of experts in strategic and statutory planning, economic development, GIS, building control and other relevant disciplines from the following organisations:

- City of Melbourne
- City of Port Philip
- City of Stonnington
- City of Yarra
- City of Maribyrnong
- Moreland City Council
- Metropolitan Planning Authority
- Department of Environment, Land, Water and Planning

3. A BRIEF NOTE ABOUT HOW WE UNDERSTAND MAKING

To understand makers, we attempt to first define the term, "maker," and to describe how they are understood as workers and producers. We contend that planning and support for urban makers is focused on notions of productivity, producing at scale, innovating and other activities that add value to making. This focus has limited explanatory power for urban makers.

This chapter argues that the maker is a creative worker who participates within the cultural economy. This concept of makers may give us some tools to understand why we see drivers of making identity and preference that seem to defy what we know about traditional manufacturing.

3.1 WHO COUNTS AS A MAKER?

Kwon and Lee (2017) argue that makers participate in the makers *movement*, where they belong to a larger "cultural trend that focuses on an individual's ability to be a creator of things using technology" (p. 1). They argue that makers often work from home and utilise modern production techniques such as "mills and laser cutters, and 3D printing" (p. 3), and that makers often share knowledge and learn new skills by participating within a community of makers.

Papavlasopoulou, Giannakos, and Jaccheri (2017) also define makers by their culture, which they describe as a "philosophy in which individuals or groups of individuals create artifacts that are recreated and assembled using software and/or physical objects". They suggest that a key aspect of being a maker is their ability to create and that one reason for the significant growth within the maker community is due to the increasing accessibility of "digital fabrication technologies" (p. 57).

Furthermore there is a pedagogical aspect to makers, as their work "democratizes design and making" (Tanenbaum, Williams, Desjardins, & Tanenbaum, 2013, p. 2603). This new democratic sharing of knowledge presents new ways of thinking, leading to the development of alternative governance structures.

This is a relatively narrow definition of the maker leaving many questions. *How do we distinguish between a maker who only use digital fabrication tools compared to one who uses them on occasion* *preferring instead to use low-tech tools for most of their work?* Defining the maker based on whether they do or do not use technologically advanced tools is problematic, as 'modern' is a normative statement. What one person considers to be modern might not be for another. 'Modern' is a subjective concept and an unstable basis on which to form a definition.

Outside this limited body of literature, there is a large body of theoretical research surrounding the cultural economy in which makers are conceptualised.

Making is at odds with other government initiatives such as support of *advanced manufacturing*. This is perhaps the term that comes closest to describing Makers that is also widely used in policy circles in Victoria. The Department of Economic Development, Jobs, Transport and Resources (DEDJTR) describes Advanced Manufacturing businesses as having established sustainable global competitiveness through advanced capabilities and characteristics. These characteristics frequently feature a combination of :

- anticipating market opportunities and customers' needs
- competing on value, including through developing and commercialising products and processes with significant international competitive advantage
- having strong leadership, and investing in a highly-skilled workforce
- being globally-oriented, integrated and connected
- utilising leading manufacturing technologies, techniques and data
- collaborating with business partners across value chains and with leading researchers.

3.2 THE CULTURAL ECONOMY

With the dissolution of the Soviet Union after the Second World War, there was a transition away from the massive centralised industrial economics towards a new contemporary economic structure, otherwise known as post-Fordism. (Appadurai, 1990) suggests this new society could no longer be conceptualised and explained through traditional views of the economy, as its "complex, overlapping, [and] disjunctive order" escaped any previously understood economic models (p. 296).

One characteristic of this new economic structure was the increasing relevance "of sectors whose outputs are imbued with significant cultural or symbolic content" (Scott, 2001, p. 11). Also known as the cultural economy, which describes the convergence of "features [within] contemporary capitalist society… between the domain of the economic on the one hand and the domain of the cultural on the other" (Scott 2001, p. 11). Over time the cultural economy has also become synonymous with "similar terms such as 'creative economy', 'cultural industries' and 'creative class', all of which describe a space where the 'cultural' and 'economic' collide" (Gibson and Kong 2005, p. 542).

Gibson and Kong (2005) suggest that one way to interpret this new economy is through the creative index approach where makers would be classified as belonging to the creative class.

(Peck, 2005) laments that "creative individuals have become the preeminent carriers of economic-development potential, so the pursuit of economic growth becomes neatly synonymous with the publicly funded seduction of the Creative Class" (p. 765). Gibson & Kong (2005) suggest that this new 'implication of work' has not been thoroughly explored, as modern conceptualisations of these 'cultural' workers are bound to normative discourses found within the literature exploring the cultural economy.

3.3 SOCIAL PROCESSES WITHIN THE CULTURAL ECONOMY

Gill and Pratt (2008) suggest that the rise of the creative industries and cultural work is a result of the “broad changes in contemporary capitalism” which has produced a precarious situation where “increasing numbers of workers in affluent societies are engaged in insecure, casuali[s]ed or irregular labour” (p. 2). Therefore, new study of the intersection between labour and life has emerged. Rising from the oppressive and exploitative tendencies of the capitalist regime, combined with the precariousness of cultural work, the cultural economy offers the possibility of generating a new political subjectivity that is unique from that of traditional trade and workers unions.

According to Gill and Pratt (2008), there is a fulfilment experienced by creative workers within the cultural economy who find their work to be “profoundly satisfying and intensely pleasurable”, and “speaks of deep attachment, affective bindings, and to the idea of self-expression and self-actualization through work” (p. 15). This dialogue between work and culture has generated a new discourse that conceptualises the social, cultural and political experiences of creative workers.

There is a gap in the literature as it does not offer fixed, operational ways to identify makers within the current economic-geographical paradigm. The literature also does not explain why creative workers lack a sense of solidarity, even though they share a number of common experiences -- or why they derive identity from the city that surrounds them as well as the products that they produce. Given that the political potential of workers within the cultural economy has yet to take form there is no clearly defined way of understanding the nature of their identity. This is a contribution of this report.