

The Australian manufacturing *Mittelstand*: An initial exploration

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Abstract:

This paper examined the nature of the German *Mittelstand* and how it is defined within the academic and non-academic literature. In doing so, a brief history of the German *Mittelstand* provided a context for characteristics of this class of business, which are largely qualitative in nature, and which indicate that *Mittelstand* is not necessarily synonymous with small and medium enterprise (SME), however that may be defined. Nevertheless, a conceptual framework for an Australian *Mittelstand* is suggested, based to some degree on the size of the firm to differentiate between *Kleiner* and *Größer Mittelstand*. Several Australian manufacturing firms were identified which, based on the publicly available information, appear to qualify as *Mittelstand*. The paper endeavours to provide a starting point for the development of a working definition of an "Australian *Mittelstand*", to be used in future research aimed at the reinvigoration of the Australian manufacturing sector.

Key words: Australia, characteristics, Germany, manufacturing, *Mittelstand*, SME

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INTRODUCTION

The term "Mittelstand" is German for small to medium enterprises (SMEs) as found in countries such as Austria, Germany and Switzerland. However, despite having a history that can be traced back to at least the 19th Century (von Saldern, 1992), these companies have been acknowledged as having played a critical role in the economic growth of post-war Germany and more broadly Europe (Simon, 1992). The success of the German Mittelstand has been viewed by many outside the German speaking world as a way to stimulate economic growth if their own SME sector can be stimulated (Schumpeter, 2014). However, a problem with attempts to develop effective Mittelstand oriented policies is the lack of an accepted definition for these firms. This was noted by Hommel and Schneider (2003) in relation to the financing of Mittelstand firms:

"The challenges of financing the Mittelstand are mostly discussed in practitioner publications, which are in many cases co-sponsored by organisations with a commercial interest in funding these types of companies. Empirical treatments of the subject are scarce and typically struggle with the limited availability of adequate data sources. The absence of a generally accepted definition of Mittelstand adds to the difficulty. Quantitative approaches generally use a size criterion - either the number of employees, annual turnover, or a combination of both - to differentiate between Mittelstand and other firms". (p. 53)

Berghoff (2006) traces the historical origins of the *Mittelstand* and notes that almost 99 per cent of all German businesses are SMEs as defined by having fewer than 500 employees and annual sales of less than €50 million. These firms employ around 70 per cent of the German workforce and contribute to about 57 per cent of value added. They also provide most of the vocational training in that country and are "the backbone of the German apprenticeship system" (p. 269). This reflects their crucial role in providing apprentices with the necessary work experience required to complete their qualifications. However, despite the apparent key role played by the *Mittelstand* firms Berghoff (2006) notes the paucity of adequate definition:

"It is pointless, however, to insist on better definitions, as there are no supportive data and no consensus on them anyway. It is revealing that the German government, citing the extreme heterogeneity of the sector, refuses to offer an official definition. Politically it might be unwise to exclude groups that consider themselves part of the Mittelstand. Therefore family firms with five thousand employees are regularly referred to as Mittelstand. In any case, there is no consensus among social scientists and statisticians." (p. 270)

Despite this paucity of definition the quest for developing a *Mittelstand* within countries in order to stimulate enterprise and replicate the success of Germany has seen much attention given to this type of firm. This has included non-German speaking nations such as the United Kingdom where the growth of "mid-sized companies" is now a subject of keen interest (Dakers, 2015). For example, in 2011 UK Chancellor George Osborne declared the need for Britain to emulate the *Mittelstand*:

"We want to learn the lessons of the successful Mittelstand model, which has operated in Germany for many decades." (Kirkup, 2011)

This enthusiasm by political leaders to emulate the German *Mittelstand* ignores the problem that the sector lacks definition and reliable measures over the precise contribution that it makes to the national economy (Audretsch and Elston, 1997).

In Australia the SME sector comprises firms with fewer than 200 employees and these make up around 99.7 per cent of the nation's 2.1 million businesses (DIISR, 2011a). Although the majority of these firms (approx. 60%) are non-employing micro-businesses or micro-firms with less than 5 employees, small to medium sized enterprises represent 15.5 per cent of the total (ABS, 2002; DIISR, 2011a). Such firms contribute significantly to the Australian economy by providing around half of all industry employment and more than a third of the industry value added (DIISR, 2011a). This is a similar pattern to that found in New Zealand where firms with fewer than 50 employees contribute over half the nation's employment, and where firms with less than 20 employees comprise more than 97 per cent of all registered businesses (MBIE, 2013). SMEs (using the European Union definition of firms with fewer than 250 employees) also form the majority of the firms in most of the world's advanced economies, where they provide most of the employment and a high proportion of the value added (OECD, 2010a).

This paper examines the nature of the German *Mittelstand* and how it is defined within the academic and non-academic literature. It aims to generate an initial starting point for the development of a working definition of the *Mittelstand* concept, which can be used in future research relating to the rejuvenation of the Australian manufacturing sector.

BACKGROUND – A BRIEF HISTORY OF THE MITTELSTAND

The *Mittelstand* has its origins in the emergence of a German lower middle class in the 19th Century. According to Blackburn (1977) it was this group of independent, self-employed artisans, small businessmen, shopkeepers and peasant farmers who rose up in the midst of the 1848 revolution and lent their support to the conservatives. Their own self-interest in resisting the rise of socialism and working class trade unionism made them convenient allies for the German right wing. At the time of this massive political and social revolution across Europe, Karl Marx and Friedrich Engels forecast the destruction of all small businesses by the large corporations (Berghoff, 2006). This pattern continued through the second half of the 19th and first half of the 20th Centuries, where the *Mittelstand* provided the foundation constituency of the conservative political movement, including that of the National Socialist (Nazi) Party. In 1891 the German Social Democratic Party (SDP) was announcing that:

"It is the law of nature that the economic development of the bourgeois society leads to the ruin of the small firm." (Berghoff, 2006, p. 264)

By 1925 the SDP was declaring that the trend was towards the rise of the large corporation and monopoly, with the ultimate outcome the death of the SME. What is more this view was accepted by both the left and right wings of politics (Berghoff, 2006). The impact of the Great Depression of the 1930s was particularly severe on these small holder farmers, self-employed artisans and small business owners. This economic event saw what has been described as the "Old" *Mittelstand* become linked to the Nazi Party.

There is reference to the "Old" *Mittelstand* which was a term in common use in the 19th Century to refer to these small shopkeepers, self-employed tradesmen and small farmers. It represented a

highly diverse group of interests united primarily around their not being part of the working class nor the wealthy *Junker* land-owners or large industrialists. Of particular importance to the "Old" *Mittelstand* was the desire to have their skills and rights as artisans recognised and protected officially by the state. These rights were not fully granted by the German state in the era of the monarchy from 1871 to 1914, but were recognised in the 1930s during the Third Reich and continued during the post-1945 period (von Saldern, 1992).

The rise of Germany's industrial economy in the late 19th and early 20th Centuries saw the emergence of big corporations and strong industrial trade unions. However, the *Mittelstand* continued to operate as largely small, typically family or privately owned firms with a strong focus on skilled artisanship and an investment in apprenticeships. The skills of the "master craftsman" were held in high regard amongst the *Mittelstand*, and they used their political influence to secure the passing of legislation to require such skills to be officially recognised and used to control entry into certain industries. The Nazi Party drew on the *Mittelstand* in the 1930s as the foundation upon which to revive the German economy and use it as the keystone in the maintenance of a "healthy state". As noted by von Saldern (1992), citing the German historian Frank Domurad:

"If they [the artisans] were cautious and played their cards right, they would soon no longer be compelled to tolerate the anomic strain imposed on them by the Weimar Republic and enforced by the naked power of large capital and organized labour." (p. 40)

In this manner the "Old" *Mittelstand* became natural allies for the Nazi Party and rallied to its calls to oppose the communists and the bourgeois establishment. The *Mittelstand* found itself caught between "big business" on one side and "socialism", as manifested by trade unions, on the other (Berghoff, 2006).

Ultimately the rise of the Nazis did little to improve the situation of the "Old" *Mittelstand* although it did see the introduction of regulations designed to protect skilled artisans and recognise their crafts. As Germany engaged in the Second World War, the *Mittelstand* were impacted by forced closures of small workshops and their consolidation into larger, more efficient enterprises. The artisan skills of many of the manufacturing *Mittelstand* were also turned towards the German defence industries, which initially helped to boost the profits of these firms in the early years of the war (von Saldern, 1992).

The post-war era from 1945 saw Germany divided and its economy ruined. It is interesting to note that Berghoff (2006) suggests that the *Mittelstand* survived the turbulent years of the first half of the 20th Century "relatively unharmed", and also avoided the long term historical trends that had threatened its existence (i.e. rise of corporate giants, mass production and the managerial revolution). However, the success of the *Mittelstand* is attributed to two key factors: (1) social approval and political support; and (2) the continuing demand for high quality specialised goods. This has helped to foster a post-war "New" *Mittelstand* built on niche markets into which high quality, specialised manufactures could be sold. The core attributes of the *Mittelstand* business model have been the production of high quality, differentiated products that command premium prices and require a highly-skilled workforce, strong entrepreneurial leadership, family-owned "paternalistic" management and innovation.

According to Berghoff (2006) the German *Mittelstand* was faced with a crisis by the 1970s. This comprised a loss of competitiveness in the West German economy, foreign competition and a

conservative mind-set in the management of these firms. Germany's reunification in the 1990s did not improve the situation and probably made it worse as former East Germany's largely state-owned enterprises were broken up but not replaced by viable SMEs. This led to instability within the German *Mittelstand* and forced those that remained to adopt a more global orientation.

From this short historical overview of the *Mittelstand* it can be seen that the fundamental "DNA" of these firms is their adherence to an SME ownership mindset characterised by private often family ownership, adherence to artisanal skills and the production of high quality specialised products sold for high margins in niche markets. However, as Berghoff (2006) notes, the nature of the German *Mittelstand* has changed significantly since the 1970s and many of what were formerly SMEs are now very large firms with global focus, plus a social and cultural orientation that had lost much of the original characteristics. This makes defining the *Mittelstand* even more complex.

DEFINING THE *MITTELSTAND*

As noted above there are no reliable and universally accepted definitions of *Mittelstand* firms. Our review of the literature suggests that a useful and obvious starting point is firm size, with most definitions of *Mittelstand* highlighting their inclusion of SMEs. However, while some authors, and German Government agencies in particular, tend to equate *Mittelstand* to SMEs (itself a poorly defined concept), other authors accept the inclusion of large firms. For example, Logue et al. (2015) state:

"...a firm with a workforce of over 1,000 can be considered part of the *Mittelstand*"

Meyer-Stamer (2000) includes manufacturing enterprises of more than 500 employees, and McDonald et al. (2003) classified as *Mittelstand* firms with 50 to 1,000 employees. Further, Berghoff (2006) notes:

"There are good reasons to increase the cut-off point to one thousand or more employees". (p. 270)

However, there are numerous other attributes that have been used to define *Mittelstand*. According to Berghoff (2006) these include six characteristics: (1) family ownership; (2) focused on long-term strategies; (3) ownership that is emotionally attached to the business; (4) intergenerational continuity of ownership; (5) an informal and patriarchal culture; and (6) independence.

Almost all German *Mittelstand* are family owned and many are managed by the owner (Berghoff, 2006). Perhaps as a result, there is a strong emotional attachment to the firm and a strong sense of independence (BMW, 2013). The *Mittelstand* are also identified as exhibiting "generational continuity" with many, as family owned firms, having survived the transfer of management across one or more generations of the owning family (Berghoff, 2006). Such firms also tend to have a management outlook and planning style that is especially long-term with focused strategies and an SME style close proximity to their customers, while also being regionally located and helping to support local communities (Berghoff, 2006).

As outlined earlier, the products produced by German *Mittelstand* are often niche, with many feeding into the supply chains of larger firms (BMW, 2013). There is a strong commitment to innovation and quality within the *Mittelstand*, reflecting the long history of an artisanal culture and mindset, and this is supported by strong investment in R&D. Traditionally the financing of these *Mittelstand* firms

has been based on retained profits and bank financed debt with only limited recourse to third-party equity through venture capital investment (Audretsch and Elston, 1997).

The *Mittelstand* management culture has also been characterised as "enlightened patriarchy", which has been described as:

"...the fatherly concern most Mittelstand managers feel for their employees and their employees' families". (BMW 2013)

This reflects the family business ownership of many *Mittelstand*, but also the small business mindset of the owner-manager who has a strong sense of caring for and guiding their staff. In keeping with this small business mindset and culture other characteristics of the *Mittelstand* firm are a degree of informality and flat hierarchies (Simon, 1992a, p. 122), as well as fast decision making (Berghoff, 2006). Their human resources policies are characterised by stable employment and commitment to training (BMW, 2013). Perhaps as a result, there is close employee identification with the firms (Linnemann, 2007).

Since the 1970s Germany's *Mittelstand* have become more focused on international trade, initially across Europe and then more widely into other countries (Berghoff, 2006; Parnell, 1999). However, they have tended to show a "cautious and sequential" approach to internationalisation, with some becoming "hidden champions" and some taking a multi-domestic approach to production as a means of being closer to customers and being described as "pocket multinationals" (Linnemann, 2007).

Our preliminary view of the literature identified at least 18 distinct attributes associated with the German *Mittelstand* firm. These are listed in Table 1 where it can be seen that the most common attributes are that these firms are SMEs and family owned. However, the view that the *Mittelstand* firm is an SME representing the small business and skilled artisan has become challenged in recent decades with definitions including large firms.

It should be noted that our review has primarily focused on the English language literature. Further, in reading Table 1, it should be noted that not all authors addressed all characteristics as most cited papers were addressing some aspect of the German *Mittelstand*. Hence, the absence of a characteristic from an author's list is not indicative of them dismissing that factor. That said, the most commonly nominated defining characteristics in addition to size are: (1) family ownership; (2) long-term focus; (3) niche product; (4) generational continuity and (5) innovation. Moreover, while *Mittelstand* is often equated to SME status, half the authors included large firms in their grouping.

<INSERT TABLE 1 HERE>

This initial review of the way the *Mittelstand* concept has been defined in both the academic and wider literature highlights the lack of consensus over definition for this type of business. Although it provides a useful starting point for future research that is important if the real value of *Mittelstand* firms are to be properly understood. As Audretsch and Elston (1997) observed, the lack of good definition and as a result good measures of the role of the *Mittelstand* makes it difficult to assess their direct contribution to the German economy. The ability to accurately determine their contribution to trade, employment and economic growth is compromised by this lack of definition. This remains important not only for assessments of the role played by the *Mittelstand* within the

German economy, but also for countries that seek to emulate it and compare the performance of their own "*Mittelstand*" firms against those of Germany. Examples of this can be found in nations such as Japan, Italy, Portugal, the United States and Britain (Audretsch and Elston, 1997).

Conceptual framework for *Kleiner Mittelstand* and *Größer Mittelstand*

To illustrate this emerging concept of *Mittelstand* we offer Figure 1 as a starting point. As shown the *Mittelstand* firm is characterised by family or private ownership and an ownership that is either engaged directly in the day to day operations as an "owner-manager" (common in the micro and small firms), or in an active way via strategy development (as is common in mid-sized and many larger family or privately owned firms). This characterises what we might label the smaller or *Kleiner Mittelstand* and the greater or *Größer Mittelstand*.

<INSERT FIGURE 1 HERE>

The *Kleiner Mittelstand* firm, in the case of manufacturing, is therefore likely to be a micro or small firm that is owner-managed and focused on the production of artisanal products for specialist or niche markets. This requires these firms to orient towards high quality or at least unique products that can be exported and/or plugged into the global supply chains of major companies. Innovation is a key feature of these firms in order to enable them to maintain a competitive position within these markets. It should be noted that such innovation is not necessarily based on high-technology. Low to mid-tech industries can also have such firms operating within them (Hirsch-Kreinsen, Jacobson and Roberston, 2005). However, if such firms are able to successfully commercialise their innovations and establish competitive niches in selected markets they will be able to sustain growth, employment and make a strong contribution to the national economy.

The *Größer Mittelstand* firm is a medium to larger firm with up to 1,000 employees. Its size and management structure will enable it to have a long-term strategic outlook. Attributes that characterise this type of firm are a commitment to maintaining a stable workforce and helping to keep its skills high through training and staff development. In return such firms are likely to engender the loyalty and identification of their staff with the enterprise. The *Größer Mittelstand* firm, like its smaller counterpart, is also committed to innovation and exporting, but it is likely to approach financing new products or export expansion in a relatively cautious manner.

IDENTIFYING AN AUSTRALIAN MITTELSTAND

As outlined in our introduction the Australian SME sector comprises a significant proportion of the national economy and plays a key role in employment generation and economic growth. However, is it possible to identify an Australian *Mittelstand* and if so what might its attributes be?

In addressing this question our focus is primarily on manufacturing firms. This is a reflection of our wider interest in this sector, but also because the manufacturing industries have been the primary source of much of Germany's *Mittelstand* "hidden champions" (Simon, 1996a).

Defining the Australian manufacturing *Mittelstand*

Drawing on the attributes outlined in Table 1, any definition of an Australian *Mittelstand*, particularly one that is relevant to the manufacturing sector would need to initially focus on firm size and ownership structure. As our conceptual model illustrated in Figure 1 suggests, there is likely to be at

least two broad groups that we have labelled the *Kleiner Mittelstand* and the *Größer Mittelstand*. These would have the characteristics discussed earlier in this paper.

Australia's manufacturing industry is a diverse sector that employs an estimated 991,800 people, while contributing significantly to gross industry value added (DIISR, 2011b KordaMentha, 2013). Of this workforce the majority (61%) are employed within SMEs, divided into micro (28%), small (24%) and medium sized firms (9%) (ABS, 2008). However, if we draw on the attributes of the *Mittelstand* outlined in Table 1 and include larger firms with up to 1,000 or more employees a further 20 per cent of all employment would be added. This would suggest that the Australian *Mittelstand* manufacturers would represent 81 per cent of all employment and 72 per cent of all value added within the sector (ABS, 2008).

In terms of businesses, the Australian manufacturing sector has around 131,183 operating firms of which just over half (52.3%) are non-employing micro-enterprises that are operated by a self-employed artisan. The next largest groups are small firms (41.9%) with less than 20 employees, and then medium sized firms (5.3%) with between 20 and 200 employees. Large firms comprise around 0.5 per cent of the total (ABS, 2006). This would suggest that within the Australian manufacturing sector there is a potential structure as follows:

Kleiner Mittelstand: This group comprises about 123,575 micro/small manufacturing firms. It provides employment for around 511,769 people (including self-employed artisans), representing 52 per cent of the total manufacturing workforce. In addition it contributes around 36 per cent of the total industry value added.

Größer Mittelstand. This group comprises about 7,000 medium to larger firms (with up to 1,000 employees). It employs around 286,630 people or 29 per cent of the manufacturing workforce, and contributes 36 per cent of the total industry value added.

In common with German *Mittelstand* the Australian variety would need to have similar attributes across the two generic types. While size of payroll is only one attribute of such firms, the elements identified in Figure 1 reflect a range of components that offer a useful framework for guiding future research. D'Amboise and Muldowney (1988) provided a further conceptual framework for the analysis of SMEs comprising five key dimensions: (1) the "task environment" surrounding the firm (e.g. industry environment, export or domestic markets, competition etc.); (2) the "organisational configuration" of the firm (e.g. size, ownership structure, complexity); (3) the "managerial characteristics" of the firm's owners and managers; (4) the "evolution" or growth cycle of the firm; and (5) the "success-failure" of the firm in seeking its strategic goals. Together these provide a conceptual framework for exploring the Australian manufacturing *Mittelstand* as shown in Table 2.

<INSERT TABLE 2 HERE>

DISCUSSION AND CONCLUSIONS

Our aim of identifying, defining and then researching the characteristics and dynamics of an Australian manufacturing *Mittelstand* is motivated by the desire to help reverse the decline of the sector. Perceptions of the actual and impending demise of Australian manufacturing are no surprise given the regular feed of headlines in Australia. Although on the face of it, manufacturing is reducing

in significance in Australia, it is a key element of any advanced economy. This is due not only to the sector's economic contribution to its host economy in the form of industry value add and employment, but also the high levels of involvement of the sector in research and development (R&D). According to the Australian Bureau of Statistics (ABS, 2013), in terms of business expenditure on R&D (BERD):

"Manufacturing and Mining remained the largest contributors to total BERD in 2011–12, contributing \$4,474 million (24%) and \$4,104 million (22%) respectively. Financial and insurance services (\$2,985 million or 16%) and Professional, scientific and technical services (\$2,832 million or 16%) were the next largest contributors. Together, these four industries accounted for more than three quarters (79%) of total BERD in 2011–12."

Manufacturing's disproportionate contribution to R&D can be seen in Figure 2 which shows the contribution it makes as a sector to BERD and GDP.

<INSERT FIGURE 2 HERE>

It should also be noted that the mining sector's investment in actual R&D as demonstrated in Figure 2 has been challenged. For example, at the time of the debate in 2009-2011 on reforms to the Australian Government's tax incentives for R&D, it was contended that the mining sector's expenditure had been an accounting exercise and had "... mostly been directed at tax minimisation rather than technology maximisation" (Green, 2015). Further, manufacturing is also a major contributor to skills development and training. According to Green (2015):

"Without manufacturing, we face the prospect of losing science and engineering expertise that has taken generations to nurture in research and production. Manufacturing directly employs one in five engineers in Australia, and many more indirectly. These skills are not only critical to new growth industries but are core infrastructure skills on which every modern economy depends."

"Many people initially trained in manufacturing move to other industries. Where will the engineers, technicians, maintenance fitters and machinists come from to install and maintain our telecommunications, power stations, water plants, transport and defence systems? The resources sector does not train for these skills, but 'buys them in'."

By comparison, Karmel and Rice (2011, p. 49) noted:

"...the overall conclusion is that the resources sector is in general a small player in the provision of apprenticeships and, moreover, it employs fewer apprentices than would be expected, given its share of trade employment."

Nevertheless, in Australia the proportion of GDP contributed by manufacturing and both the absolute and relative the size of its workforce is reducing as illustrated in Figure 3.

<INSERT FIGURE 3 HERE>

Some observers attribute this proportionate reduction to the relative growth of the service sector, and in the recent "mining boom", the contribution to GDP of mineral exports has increased substantially. Further, as the manufacturing sector has introduced greater levels of automation and offshore manufacture of key components, the level of employment provided by the sector relative to services or construction has declined as illustrated in Figure 4.

<INSERT FIGURE 4 HERE>

In terms of the absolute performance of the manufacturing sector, increased competition from China and similar expanding economies under liberalised trade arrangements have been among the factors working against manufacturers. So have the terms of trade arising from the high Australian dollar bolstered by the boom in minerals exports. That said, it has also been suggested by some authors that the apparent lowering of the contribution to GDP by manufacturing reflects an underestimate of the value add of the sector is due to the increasing importance of the services bundled with tangible goods that are increasingly the product being offered by successful manufacturers. As Banks (2011, pp. 10-11) notes:

"The fact that the relative importance of manufacturing is falling does not mean that its absolute importance has changed that much. Real output has actually risen by around 50 per cent since 1984. A shift to more capital-intensive production nevertheless saw manufacturing employment fall from 1.1 million in 1984 to 950,000 in 2011, but this is a small change relative to the economy-wide increase in employment over that period. Finally, the reduction in employment in the manufacturing sector may to some degree be a reflection of increased productivity arising from substantial investments in capital equipment."

"Furthermore, official employment numbers significantly overstate manufacturing's relative decline. Part of this is a statistical artefact, with many services once provided 'in-house' – such as transport, accounting, IT, legal, and design services – now being outsourced, and the jobs therefore no longer classified as 'manufacturing' in official statistics."

Nevertheless, the loss of key sub-sectors such as the impending closure of the automotive assembly industry can be expected to have a cascading effect across both the manufacturing sector and the wider economy. Anticipated losses may include reduced industry value-add, loss of employment, de-skilling, and loss of the services directly and indirectly provided by the automotive sector to the wider economy and society. As is common with manufacturing sectors around the world, substantial investments in staff training occur in this sector, and these benefit the entire economy.

Similarly, as noted above, R&D expenditure by the Australian manufacturing sector is disproportionately high and again, it is reasonable to assume spill-over effects for the broader economy. For example, in 2009 manufacturing contributed 26 per cent of all expenditure on R&D across Australian industry even though it represented only 9 per cent of total GDP (KordaMentha, 2013).

If manufacturing in Australia is to survive and prosper it must become more focused on innovation both in terms of product and business model design. It must also adapt to both new technologies and also the globally networked and interconnected nature of world trade. Close proximity to customers, plugging into global supply chains and offering solutions not products with high levels of customisation are all essential factors for success (KordaMentha, 2013).

An Australian *Mittelstand* is yet to be defined but as outlined in this paper it will need to focus on more than just size of payroll. Also important are the ownership structure and characteristics of the management and their approach to customers, R&D, innovation, human resource development and exporting. Financing the *Mittelstand* may be further area for future research, as it has been seen as an area for special attention within the German economy (Audretsch and Elston, 1997; Hommel and Schneider, 2003). Niche products, particularly for the smaller *Kleiner Mittelstand*, plus the need for high levels of innovation and global focus will all be part of the units of analysis required in investigating these phenomena.

Australian *Mittelstand* in common with their German counterparts appear to place a stronger focus on bundling services and support than is often the case with Australian SMEs and this appears to provide them with a strong competitive advantage. In this, they exhibit similar characteristics to those described by McDonald et al. (2003). In order to conduct any study of Australian *Mittelstand*, it is necessary to define or at least, describe their characteristics. While it is as difficult to define Australian *Mittelstand* as it is the German variety, it is possible to ascribe characteristics; many of which as can be seen above are shared. To further illustrate this we have provide a list of 10 examples of firms that might fit the general profile of an Australian *Mittelstand*, these are outlined in Table 3. It should be noted that only two of these firms (Orica and Quickstep) are publicly listed companies.

<INSERT TABLE 2 HERE>

Given the paucity of large Australian manufacturing firms, it is tempting to simply aim for more SMEs, however this may not have the desired effect. Despite the aura surrounding small business in Australia, the UK and the USA, Nightingale and Coad (2013) observe:

This belief in entrepreneurship [i.e.: startups] as a potential solution to unemployment, economic growth, regional development, and innovation leads to substantial levels of public support. Looking at UK data, Storey (2006: 248) estimates that "the annual total financial support for small business is equivalent to a public expenditure of GBP 7.9 billion...To contextualize that expenditure, each year the UK spends more taxpayers' money on small businesses than it spends on the police force" or universities at GBP 7 billion each.

Nevertheless, while start-ups may not be the answer to the creation of jobs and high growth sustainable companies, they do play a role. However, the *Mittelstand* is less about start-ups and more about established SMEs that have the sustainability to grow modestly and provide employment and economic contributions to the national GDP in a way that most start-ups will never do (Mason and Brown, 2013).

Care will need to be taken in any future investigation into the Australian *Mittelstand* to separate the firms that can offer significant contributions to the national economy. The concept is not just a replacement for the term SME. Hence, while the term SME is widely used in industry, government and academia, it is specific to the particular environment in which it is used. Not only are quantitative criteria very different from definition to definition, but the criteria themselves vary greatly from definition to definition, with some based on employees, others based on turnover and some both. Hence, except in a narrow set of circumstances, "SME" is not very useful. Other terms appearing in the literature that could be confused with *Mittelstand* include "high growth firms" (HGF) and "gazelles". The OECD defines HGFs as;

All enterprises with average annualised growth greater than 20% per annum, over a three year period should be considered as high-growth enterprises. Growth can be measured by the number of employees or by turnover. (OECD 2010b)

A related term is "Gazelle firm", which is described by the (OECD, 2010b) as "... the subset of high-growth enterprises which are up to five years old." Hence, the definition of gazelle used by the OECD and the European Communities / OECD (2010b):

All enterprises up to 5 years old with average annualised growth greater than 20% per annum, over a three year period, should be considered as gazelles.

In this regard, they have little in common with *Mittelstand*, which in contrast with the gazelles are likely to be older than five years and generally take a risk-averse approach. The final definition and business type associated with *Mittelstand* is that of "hidden champions" (Simon, 1992a/b; 2009). A company must meet three criteria to be considered a "hidden champion": (1) be first, second or third in a global market or number one on its continent; (2) have revenue below \$US4 billion; and (3) possess a low level of public awareness. Clearly, given the modest size of the Australian economy and market, the first criterion must be treated with caution in Australia. Indeed, referring to a company being "number one on its continent" is arguably only relevant in Europe, North America and Asia. At this time, in most segments, becoming one of the top three competitors in Australia, Africa or South America would be a relatively modest achievement and one which could not be compared to being a top three firm globally.

Some authors infer that all *Mittelstand* are hidden champions, which is clearly not the case. Simon (2009) refers to about 2,000 hidden champions, whereas *Mittelstand*, however defined are in the millions (see Simon (2009)). Hence it is arguably true to say that while all *Mittelstand* are not hidden champions, many hidden champions are *Mittelstand*. That said, many Australian *Mittelstand* share some of the characteristics of hidden champions in that they have larger shares of global markets than would normally be expected of Australian manufacturers.

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