SUCCESSFUL SMALL-SCALE MANUFACTURING: A COMPARATIVE ASSESSMENT ACROSS FIVE EUROPEAN ISLAND REGIONS*

Godfrey Baldacchino§

Abstract. This paper reviews select qualitative data drawn from 144 successful, small scale, locally owned, export-oriented manufacturing firms from 5 European island regions: Aland, Iceland, Saaremaa, the Scottish Isles and Malta. The comparative approach suggests some observations and reflections relating to Malta’s relatively low density of export-oriented manufacturing SMEs.

Introduction

Small Firms in Small Islands

Small-scale enterprises are recognised the world over as key to sustainable economic development (Liedholm and Mead, 1999; Jones and Tilly, 2003); and more so in small economies than large ones where they easily command an even larger proportion of firms in business (Granovetter, 1986; MacDonald, 1999; Wignaraja and O’Neil, 1999). Small businesses produce goods and services, create jobs, motivate those associated with them to higher levels, decrease dependency on government, facilitate the integration of ethnic minorities, and support an economic development path that is considerably less expensive and more efficient than the
massive influx of capital, advanced technology and highly specialised personnel needed for developing large businesses (McClelland, 1986: 232; Boissevain et al., 1990). Their critical importance to the Maltese economy has been highlighted in a few seminal articles (Briguglio, 1998; Boissevain, 1991; Mizzi, 1996). That policy makers seek to introduce a fiscal, human resource and general policy regime that is supportive of and conducive to successful SME establishment and growth should therefore come as no surprise; meanwhile, certainly since 1938, academics have been poring over the conditions that spawn entrepreneurship and generate innovative and successful SMEs (Murray, 1938).

Much of this effort to analyse the contribution of small firms is based on and confined to national or regional markets. After all, the regulatory environment, educational and human resource development policies, taxation regimes and other features deemed to have an impact on the number and quality of entrepreneurs, innovators and small firms are typically within the control and decision making power of national governments, with features of shared rule in the case of members of regional fora (as in the case of environmental, labour relations and occupational health and safety regulations within the European Union). The comparative, cross-national examination of small firm ‘success’, however defined, is a more demanding undertaking, requiring a careful methodology to control for various national, fiscal, product area and enterprise specific variables.1

The NISSOS Project 2 has been seeking to understand the conditions behind the success of exceptional small firms in Europe by using an inductive, comparative methodology. The project has determined a tough and stringent set of criteria for defining success; sought out firms which match those criteria; and then delved into detail to understand the particular ensemble of characteristics of these firms, teasing out what appears to be idiosyncratic, and then re-examining these features in the

1. A case in point is the comparative study into SME performance undertaken by the Centre for Advanced Studies, Cardiff University, comparing firms in Denmark, Ireland and Wales. See www.cf.ac.uk/cass/projects/comparative_performance.html (all internet sites quoted in this paper were accessed during December 2004).
2. NISSOS (the Greek word for island) also stands for Network of Islands for Small Scale Organisational Success. The NISSOS Project is a 3-year pilot project under the European Commission’s Leonardo da Vinci’s Vocational Training Programme. It is coordinated by Malta Enterprise, and has 11 partners from 5 island regions of Europe: Åland, Iceland, Malta, Saaremaa (Estonia) and the Scottish Isles (see:www.nissos.net).
Successful Small-Scale Manufacturing

context of general lessons for successful SME manufacturing development. The project’s special interest and focus lies is island territories, tracts of land surrounded by water, conceived as locations where successful economic activity is arguably hampered by such features as isolation, peripherality and lack of economies of scale.

The definition of success adopted by the NISSOS partners has been deliberately set at a most challenging level. To qualify, island-based firms had to be: locally (that is, island) owned; primarily export oriented; having less than 50 employees; involved in a manufacturing activity; and utilising adapted or locally developed (and not just imported and/or adopted) technology. The choice of these criteria was a direct response to the tenets of conventional wisdom as they apply to (especially small) island territories. Such small locations are meant to suffer from limited ability to reap the benefits of economies of scale in both public goods and private service provision, both being generally constrained by indivisibilities (Alesina and Spolaore, 1997; Barro and Sala-I-Martin, 1995).

Small island economies are also less likely to be able to diversify, making them vulnerable to economic shocks (Briguglio, 1995; Commonwealth Secretariat, 1997). Public servants operate under regular conflicts of interest, and are under considerable pressure to honour obligations and curry favour (Farrugia, 1993); while a limited pool of human resources may lead to the recruitment and promotion of the mediocre (Streeten, 1993). Small islands are thought to be structurally cheated of markets, economies of scale and institutional “thickness” (Amin and Thrift, 1994: 14-15). These ideas are well encapsulated in Article 299.2 (ex-Article 227) of the Treaty of Maastricht (1997) as applying to the European Union’s outermost (or so called ultra-peripheral) regions. This Article claims that: “... remoteness, insularity, small size, difficult topography and climate [as well as] economic dependence on a few products” are structural features whose permanence and combination severely restrain (especially small) island development.

The NISSOS definition was conceived with a view to challenge such received wisdom, in support of growing empirical evidence to the contrary (Easterly and Kraay, 2002; Armstrong and Read, 2002, 2003; Baldacchino, 2005a). Furthermore, in raising the bar as high as possible,
and in excluding many thriving small firms from its remit in the process, only the truly exceptional were being scouted by NISSOS. Moreover, the size of the database was rendered manageable and avoided any resort to sampling. In this way, and in spite of some initial skepticism, no less than a population of 144 firms in the 5 partner island territories which matched the criteria was identified.

The lessons from NISSOS are still being evaluated, and other academic papers are exploring other implications arising from the research results (Baldacchino, 2005b). Meanwhile, a training manual as well as a multilingual CD-ROM are being produced as part of the project’s deliverables. This paper invites readers to critically consider the quantity and quality of Malta-based successful firms, in the context of the NISSOS data and research template.

**Number of Firms**

One stark implication of the database is that Malta scores somewhat poorly in terms of its number of successful firms. The ratio of successful firms in Malta (as defined) in relation to local population is by far the lowest within the 5-island sample (see Table 1); and this in spite of Malta having by far the largest population base of the 5-island partnership. Unless this statistic is the outcome of under-representation of actual firms, Malta appears to suffer from a relative dearth of successful, small, export-oriented, manufacturing businesses.

<table>
<thead>
<tr>
<th>Island</th>
<th>Pop (000)</th>
<th>Land Area Km²</th>
<th>No. of islands</th>
<th>Jurisdiction</th>
<th>No. of Firms (Total 144)</th>
<th>Firms/10,000 pop.</th>
<th>Mean Workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aland</td>
<td>26</td>
<td>1,430</td>
<td>21</td>
<td>Autonomous</td>
<td>25</td>
<td>9.6</td>
<td>15.9</td>
</tr>
<tr>
<td>Iceland</td>
<td>290</td>
<td>103,000</td>
<td>4</td>
<td>Sovereign State</td>
<td>42</td>
<td>1.5</td>
<td>26.0</td>
</tr>
<tr>
<td>Malta</td>
<td>400</td>
<td>316</td>
<td>3</td>
<td>Sovereign State</td>
<td>33</td>
<td>0.8</td>
<td>22.5</td>
</tr>
<tr>
<td>Saaremaa</td>
<td>36</td>
<td>2,900</td>
<td>7</td>
<td>County</td>
<td>19</td>
<td>5.3</td>
<td>23.3</td>
</tr>
<tr>
<td>Scottish Isles</td>
<td>100</td>
<td>10,110</td>
<td>87</td>
<td>6 local authorities</td>
<td>25</td>
<td>2.5</td>
<td>10.5</td>
</tr>
</tbody>
</table>

*Source: NISSOS Project, 2004*
Successful Small-Scale Manufacturing

The reasons for this shortfall could be varied and complex. However, a few explanations suggest themselves readily.

First of all, a relatively large population size permits some manufacturing firms to be set up with an exclusively local market orientation. Thus, a larger population base, especially on a fairly unified land mass (as in the case of Malta, followed by Iceland) increasingly means a potential domestic market for manufactured products, avoiding the obligation to export, and its associated hassles, costs and problems. In contrast, the smallest jurisdictions in the database, the island regions of Aland and Saaremaa, have such a small domestic population base that most manufacturing operations must consider export activity for sheer survival. The smallest economies are therefore more strongly in the throes of an ‘export or perish’ orientation (Brookfield, 1987), imposing tionally competitive forms. The relationship between small population base and SME manufacturing export density on the basis of NISSOS data is statistically significant and clearly visible from Figure 1.

Secondly, the ability to export off-island to a territory which is part of the same political jurisdiction, speaks the same language and/or which is sympathetic to the island region facilitates the export transaction. In this sense, it is the sovereign islands of Malta and Iceland which lose out;

Figure 1
Population Size Versus Ratio of Successful Firms
while the Scottish Isles, Saaremaa and Aland can all benefit from a positive association with mainland Scotland/U.K., mainland Estonia and Sweden/Finland respectively. Sovereignty can thus be seen as a handicap to off-island trade; it is only by virtue of bilateral or multilateral regional trade agreements that this handicap can be minimised.

Thirdly, sovereignty also exercises an opposing, positive influence on legislative capacity, however. Having the jurisdictional power to pass laws and regulations, along with the capacity to run and operate one’s own shipping and air transport networks, facilitates manufacturing exports. The number of successful firms in Malta and Iceland would have arguably been even lower had not these island regions also been sovereign states in a position to deploy their own legislative powers as well as national airlines (Air Malta; Icelandair) and shipping companies (Sea Malta; Samskip and Eimskip) to support indigenous manufacturing export efforts. In contrast, the Scottish Islands, with their jurisdiction shared by no less than six local authorities, half of whom share responsibility over both island and mainland regions, find themselves politically starved of a coherent governance structure that might help them export more and better; though a ferry service under public ownership, Caledonia MacBryne, is a subsidised monopoly, and this somewhat facilitates trade between the islands and the mainland (Royle, 2001: 111-3). Aland, being a unique, autonomous but non-sovereign jurisdiction, has some limited ability to oblige its own political machinery to render economic service (with a strong bias in favour of its own impressive shipping fleet); while Saaremaa is a county/local authority and thus enjoys only administrative capacity.

Type of Firms

A different assessment can be carried out when one takes a more detailed look about the types of products that these 144 successful manufacturing firms are producing. The products come in two main varieties. On one hand, one finds a clutch of low-tech, labour-intensive, mainly craft or agro-based products deliberately seeking to plug into the tourism market and seeking to associate themselves with their particular island brand or lure. It is the tourist who would incur any transport costs here. On the other hand, one finds high-tech, high-value added, knowledge-intensive
Successful Small-Scale Manufacturing

products which are either light in weight/small in volume or else are ‘virtual’ products which can be ‘exported’ with considerable ease, such as downloaded from an internet site. In both cases, costs of transportation are minimal or nonexistent. The products are classified by island territory and economic sub-sector in Table 2.

Even the empty cells in the table are suggestive. Saaremaa, operating in an economic environment still undergoing fledgling liberalisation after many years under state totalitarianism, has very few small, locally-owned, high-tech, export-oriented firms. In spite of North Sea Oil and Gas, the Scottish Isles have not seen this industry develop any notable upstream or downstream local manufacturing activity amongst its SMEs. Iceland, with its exhorbitant labour costs, finds itself uncompetitive in labour-intensive products. Its tourist industry, although up-market, boasts ‘only’ some 300,000 visitors per year.

Instead, Iceland has done well in spawning a clutch of diverse, successful, small firms from its major export industry (fishing), as well from a burgeoning information technology sector. The association with wellness and fitness supports the sale of some of its health products, based on fishery derivatives. A similar and deliberate association between wood and Saaremaa, the renowned Mediterranean diet (wine, olive oil, tomatoes) and Malta as well as whiskey and Scotland, facilitates the export of such specific products as long as they maintain the highest levels of quality: this strategy fends off similar competing products from cheaper locations.

Malta’s decorative glassblowing industry is an interesting example of an ‘invented tradition’: a labour-intensive operation that has been marketed as ‘traditional’ when the local industry owes its birth to two English partners as recently as 1968. In such cases, as with the modern invention of the Scottish kilt and tartan (Trevor-Roper, 1983), even the tradition has been (ingeniously) manufactured. In the Malta case, it has also been successfully indigenised.

There is also evidence of some of the firm clustering that is today being hailed as a key driver of competitive industry. By creating conditions suitable for the development of collective efficiency, clustering enhances

### Table 2
**Products of Successful Firms by Island and Economic Sub-Sector**

<table>
<thead>
<tr>
<th>Island</th>
<th>No. of Firms</th>
<th>Crafts</th>
<th>Agro-Industry</th>
<th>Chemical / Plastic</th>
<th>IT / Hi-Tech/ Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Åland Islands</td>
<td>25</td>
<td>wood panels</td>
<td>meat processing</td>
<td>sausage skins</td>
<td>purifier units</td>
</tr>
<tr>
<td></td>
<td></td>
<td>furniture</td>
<td>fish processing</td>
<td>air cleaning systems</td>
<td>welding/elect.systems</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sheet-metal (9)</td>
<td>sour apples (7)</td>
<td>plastic printing (5)</td>
<td>IT / software (4)</td>
</tr>
<tr>
<td>Iceland</td>
<td>42</td>
<td>cod/shark liver oil</td>
<td>cattle food</td>
<td>sulphur resistant</td>
<td>artificial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cattle food</td>
<td>candy</td>
<td>pipes</td>
<td>intelligence games</td>
</tr>
<tr>
<td></td>
<td></td>
<td>poultry processing</td>
<td>fish processing (20)</td>
<td>plastic tubes/fishing nets</td>
<td>anti-virus software</td>
</tr>
<tr>
<td>Maltese Islands</td>
<td>33</td>
<td>decorative glass / lace</td>
<td>olive oil</td>
<td>fish scales (9)</td>
<td>elect. equipment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>gold/ silver filigree</td>
<td>wine / sausages</td>
<td></td>
<td>fish industry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>furniture (6)</td>
<td>sun-dried tomatoes</td>
<td></td>
<td>equipment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>liqueurs (6)</td>
<td></td>
<td>digital EEGs (13)</td>
</tr>
<tr>
<td>Saaremaa</td>
<td>19</td>
<td>lime/agar/limestone</td>
<td>fish processing</td>
<td>rubber products (2)</td>
<td>aluminum boats (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>wooden houses</td>
<td>berry processing</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>wooden boats (8)</td>
<td>meat processing</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>fur products (7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scottish Isles</td>
<td>25</td>
<td>stone</td>
<td>preserves</td>
<td>toiletries / soaps (2)</td>
<td>electrical instruments</td>
</tr>
<tr>
<td></td>
<td></td>
<td>woolen knits / fabrics</td>
<td>smoked salmon</td>
<td></td>
<td>flexible circuits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>jewelry / furniture</td>
<td>whisky</td>
<td></td>
<td>observation devices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pottery / drums (12)</td>
<td>beer (7)</td>
<td></td>
<td>transformers (4)</td>
</tr>
</tbody>
</table>

*Source: NISSOS, 2004 (Number of firms in brackets)*
Successful Small-Scale Manufacturing

the competitive advantage of firms and makes it easier for them to respond to both opportunities and crises (Porter, 1990). Clustering in small island locations, however, appears to warrant some specific observations. Geographically, small firms on small islands are indeed located on relatively compact zones; once organised, they can also develop a sense of cooperative competition or ‘co-opetition’ (Golden, 1994), especially in developing a strong island brand overseas, as has been done effectively by the Shetland Lady trademark in the Shetland Islands; fourthly, they set up and cultivate crucial off-island links in order to secure markets, source new ideas, approach new clients and exploit opportunities for professional development; fourthly, especially in knowledge-driven and technology-intensive industries, key links are established with such local institutions as universities and technical colleges, business incubators and technology centres. Such institutions would be relatively few and far between in small islands; but they are even rarer in small islands which are not jurisdictions. Thus, Iceland has at least three Universities and a Technological Institute.

In Malta’s case, these are the University of Malta, the Malta College of Arts, Science and Technology, Malta Centre for Restoration and the Business Incubation Centre run by Malta Enterprise. Meanwhile, at the other end of the scale spectrum, Saaremaa and Aland each have one small technical college/polytechnic campus, while various Scottish Isles are served by some 33 satellite learning centres of the UHI Millennium Institute. Thus, those institutions which do exist in such locations have an enormous responsibility towards supporting local research and development efforts as well as facilitating the technical and professional formation of recruitable human resources. Furthermore, unlike the postulates of economic geography associated with clustering, successful small manufacturing firms on small islands do not initially become competitive on the basis of domestic competition, but must prove themselves from inception in international markets.

4. www.shetland-knitwear.com/history.html
5. The University of Iceland (www.hi.is), Reykjavik University (www.ru.is) and the University of Akureyri (www.unak.is)
6. www.icetec.is
9. www.uhi.ac.uk/learningcentres/learning_centre.shtm/mainland
A further novelty associated with successful manufacturing firms in small islands is the juxtaposition of the actual production of the commodity with a service experience. Cashing in on their attraction as targets of a ‘tourist gaze’ (after Urry, 1990), the act of manufacturing a specific product associated with a particular island is transformed into an item of interest to visitors. A factory is thus metamorphosed, without much effort, into a museum, not just a location for the production of souvenirs but also one of consumption where being there and seeing the product being made is itself memorable. This feature is being used to good effect by glassblowers and vintners in Malta, by whiskey distilleries in Scotland and finds parallels in other island locations (Baldacchino, 2002).

The Island Location of Firms

Although not always articulated explicitly, references to an enviable ‘quality of life’ on a small island can be traced to all the successful island entrepreneurs in the NISSOS database. This feature might well include a well-bonded, flexibly-specialist and loyal work-team (Bennell and Oxenham, 1983), safe places to raise children, having strong family structures and boasting other social networks based on mutual knowledge and familiarity (Boissevain, 1974; Srebrnik, 2000), and other significant and long standing ‘social capital’ supports which promote unitarism (Baldacchino, 2005c). The island effect is not only significant in extending and packaging the ‘island lure’ to potential clients (Baum et al., 2000: Fairbairn, 1988); it also attracts potential entrepreneurs, some of whom were born and bred off-island or else were born on the island but had drifted away in search of adventure, education and/or employment before being enticed back.

Conclusion and Lessons for Malta

In spite of structural handicaps, there exist a few but notable examples of successful, locally owned and export-led, small scale manufacturing operations from small islands, including Malta. These SMEs may not operate as parts of large knowledge clusters, but they have deployed their ‘entrepreneurial innovation’ skills by identifying what they can do best:

Successful Small-Scale Manufacturing

promote quality (often branded) products for selective overseas up-markets, and luring innovators or clients from overseas in the process. Theirs is a message of hope, demonstrating how the tyranny of geography can be overcome. Their stories deserve being showcased as ‘best practices’ that can being studied by other firms on the same or similar island territories. Such best practices may also, in turn, inform the training, education and professional development of business students, apprentices and/or actual or potential entrepreneurs from the same and other small island jurisdictions.

These lessons can also inform local public policy. Implications of the above research results to Maltese economic development strategy include the following:

• Fostering networks of ‘cooperative competition’ in specific export industries, with local producers joining forces to defend the quality and reputation of their brand internationally, while continuing to compete amongst themselves locally. Some initiatives have been taken here, as in the case of jewellery manufacturers (IPSE, 2001); these are now being championed by the Malta Crafts Council.

• The incorporation of institutes of technology and higher learning into drives towards the identification and promotion of entrepreneurship, for example through such initiatives as Young Enterprise, Scoops: Coops for Schools and The President’s Award, now all recognised in the National Minimum Curriculum. So far, it appears that entrepreneurship is negatively associated with graduate education in Malta (Baldacchino et al., 1997).

• Tapping into Malta’s extensive overseas diaspora, with a view to attract entrepreneurs to return to Malta and relocate their firms, or deploy their knowledge capital and extensive overseas networks in order to support local economic growth. Rather than a blanket sourcing drive, a more focused approach targeted at specific individuals may prove more successful. While Malta’s “… geographical location, modern infrastructure, adequate and flexible labour supply and political stability are some of its key advantages” (Malta Enterprise web-site: www.maltaenterprise.com) when it comes to industrial investment, Maltese living abroad can be encouraged to return with the reassurance of a quality of life and strong social networks not easily experienced elsewhere.

• Tourism is a crucial economic industry for Malta, but it is also crucial
in the sense of facilitating the export of gourmet foods and wines and other choice hand-made craft products. Tourist purchases on the island relieve the producer from the responsibility of the transportation of goods overseas, with the accompanying surcharges for customs, insurance and freight, effectively off-loading these to a consenting customer.

• Finally, Malta’s relatively low density of export oriented SMEs requires further investigation. Is the regulatory environment too stifling and bureaucratic? Do the Maltese prefer low-risk investments (such as real estate, liquid bank deposits, government bonds and gold)? And, if so, why? Do the corporate tax regime and the sprawling public sector together disincentivise entrepreneurship and innovation, instead promoting and rewarding behavioural strategies that focus on how to ‘work the system’, or intrapreneurship, including ‘safe’ full-time public sector jobs and under-declared part-time incomes (Delia, 1994)? Does the informal economy persist as a haven for local business acumen, in spite of the introduction of value added tax, because of what is perceived as a heavy corporate tax burden? Is this an attitude problem, part of the legacy of industrial protectionism which was ushered in as government policy during the 1970s as one way of defending nascent industries? Has a pervasive belief that ‘big is beautiful’ led to the benign neglect of the potential of small, local firms to create employment, leading successive governments to concentrate instead on attracting large, foreign companies to Malta (Vella, 1994) or to set up large public corporations, resulting in a “socialist black hole” of absent, stagnant enterprise (Vahcic and Petrin, 1990)? Or is it simply that entrepreneurship in Malta enjoys very low social esteem, with small business owners being, by and large, still regarded primarily as tax evaders? These are promising themes for further research.

References

Successful Small-Scale Manufacturing


Successful Small-Scale Manufacturing


