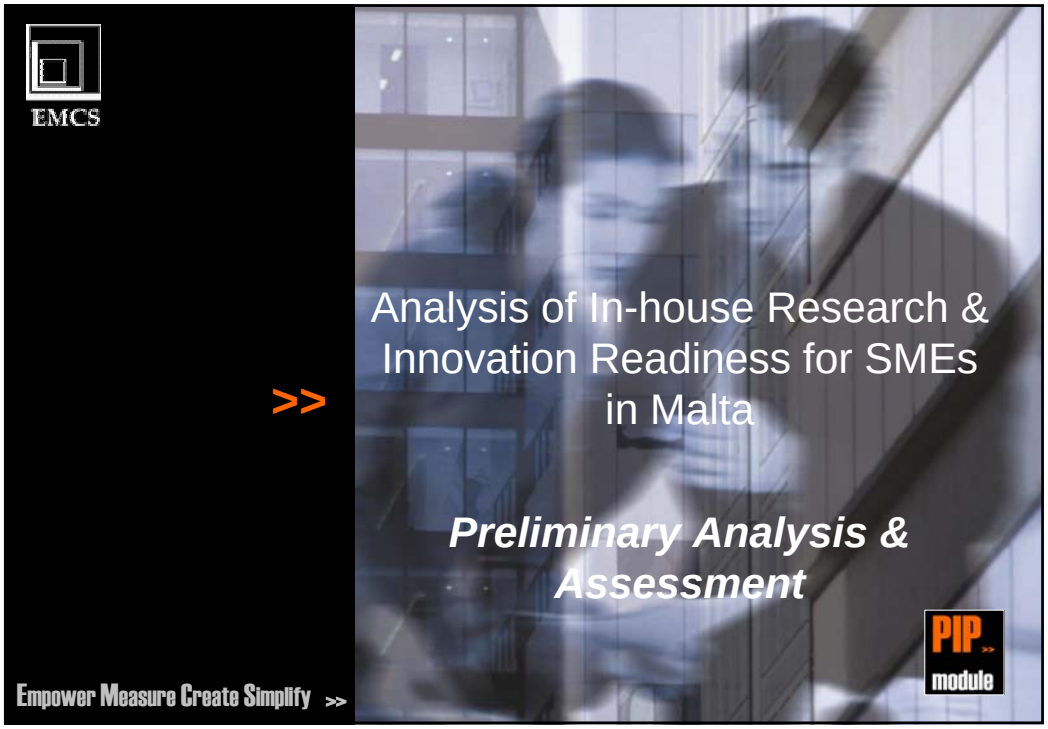


Agenda

- Overview of Study Objectives
- Definitions
- Research Process and Hypothesis
- Key findings of fieldwork
- Key Challenges

Objectives of the Exercise

- Collect data on the initiatives and policy documents of business organisations in relation to innovation amongst SME's
- Produce a snapshot image of the state of innovation amongst SMEs and any programs of initiatives instituted by SME's to promote innovation

Process of Research

- Desk research using various international studies in order to obtain an understanding of the main issues impacting on SMEs abroad.
- Over 700 SMEs were targeted using mail questionnaire in order to obtain a overview of the state of in-house research and innovation in Malta. Complemented by personal interviews.
- Interviews with industry experts and other senior governmental officials, and key players in order to devise a set of recommendations in order to take stock of opportunities and counter attack threats.

Definition of Innovation

- **Innovation**: It consists of the successful production, assimilation and exploitation of novelty in the economic and social spheres. It comes in many different forms, ranging from an invention arising from R&D to efforts to adapt production procedures, tap new markets, use new organisational approaches or create new marketing concepts.

- **Research & Development**: Research is carried out with the sole aim of increasing knowledge, with a view to potential applications. It could be for example, new technology (developed by or for the organisation) that when implemented provides scope for new products, marketing, efficiency and overall effectiveness to the organisation.

Definition of SME

- Various definitions of what constitutes an SME
- Most focus on number of employees and turnover figures
- EU classifies SME's in 3 Categories
  - Micro (up to 10 employees)
  - Small (10 – 50 employees)
  - Medium (up to 250 employees)
- For the purpose of the study EU maximum employees utilised but relaxed for Manufacturing enterprises.

International Perspective

- SMEs are becoming increasingly involved in global competitive markets, either as part of supply chains or due to expansion and growth.
- Niche markets, once the preserve of SMEs is being aggressively targeted by larger organisations, which have become more agile and responsive to more refined market segmentation.
- This pressure is particularly strong in more peripheral regions where indigenous SMEs have traditionally relied more on local markets and now find themselves ill-equipped to face market challenges of the need for growth and export in a highly competitive environment.
- In addition to local government help, SMEs are re-examining and modifying their competitive strategies by fully incorporating innovation within their people processes and products.

Research Hypothesis

Innovation in relation to leadership, people and culture

- In SMEs developing innovation, leadership is especially vital for success for a number of reasons. In most SMEs the owner-manager or management has a larger influence effect when compared with large organisations (Hale et al, 1996). Thus the leader's vision and drive must be focused on innovation if it is to be successfully incorporated in the organisation

Innovation in relation to processes, knowledge and continuous improvement

- SMEs have a generic lack of resources and overall resource strategies and action plans. Gunasakeran et al (1996) states that "overall productivity and quality improvement strategies are lacking in SMEs". Thus rapid decision making by inspired leaders can fail to incorporate innovative practice due to a basic lack of fundamental resources.

Research Hypothesis

Innovation in relation to customers and the market

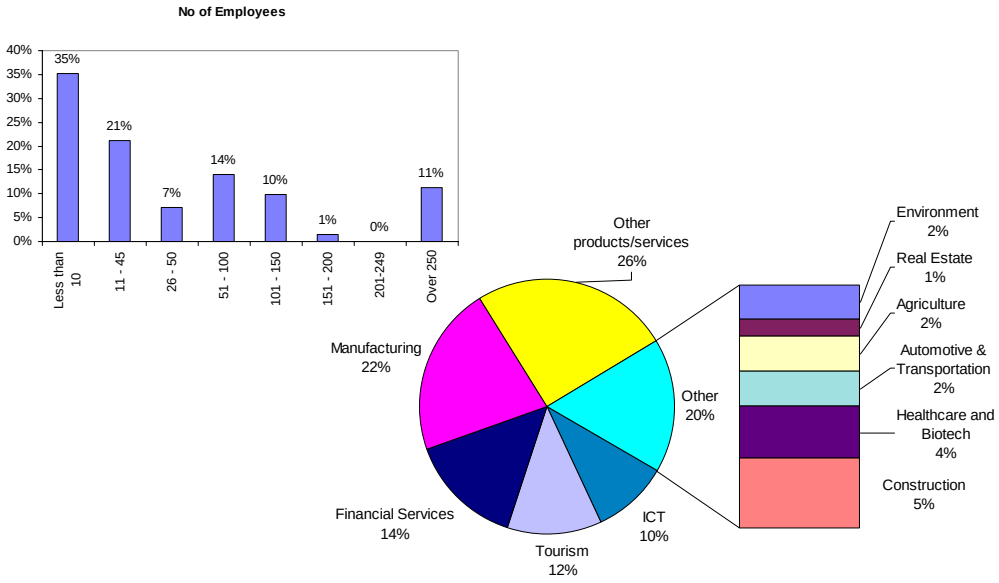
- Appiah-Adu and Singh (1998) see the need for new product development leading to market differentiation as a major opportunity for innovative SMEs in competitive markets. Their research involving 500 SMEs concluded that "there is a strong positive link between the extent of adoption of innovation orientation and the degree of customer orientation in SMEs". SMEs must become closer to the customer and ensure they are making innovative use of privileged customer information.

Diagnosis of Survey Results

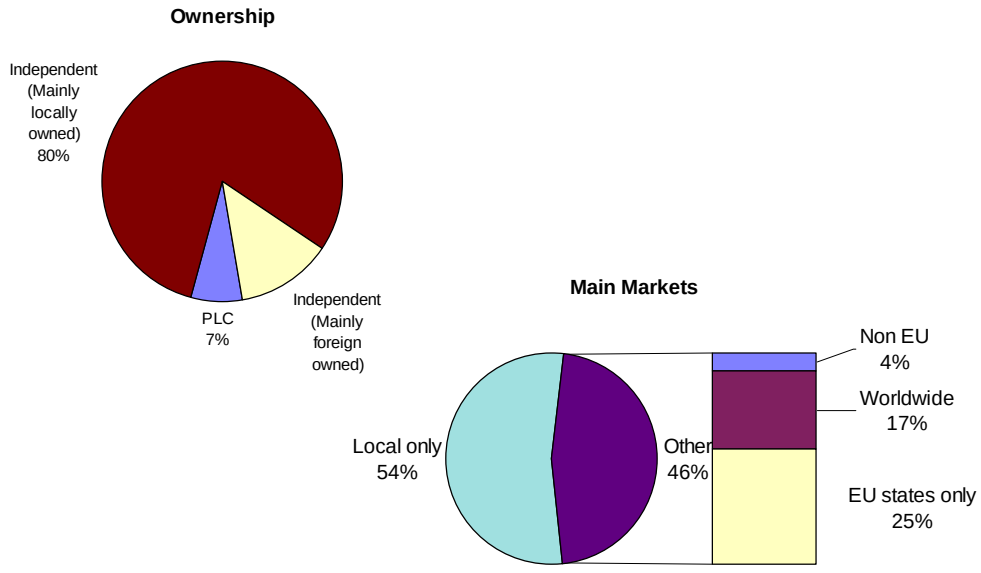
Therefore focus of the report is to explore the R&D and Innovation performance of SME's along the lines of a SWOT within the context on the basis of the following parameters:

- Innovation practices to gauge leadership styles and people
- Expenditure on R&D to gauge quality and continuous Improvement
- R&D experience to gauge the success of product and process innovations
- Knowledge of funding programs to gauge knowledge of funding opportunities
- Synergies/alliances with other partners to gauge culture to work with others for innovation

Overview of Survey Response



Overview of Survey Response

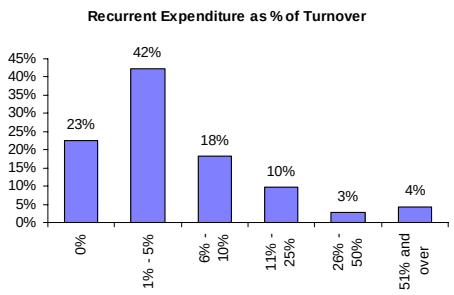


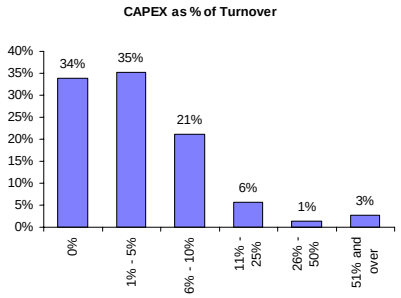
Leadership

- There appears to be a low level of prioritisation of innovation from the Top
- Significant proportion of ideas originate from external Sources (55%) rather than internal sources
- Instilling the importance of innovation within the enterprise is only frequently undertaken in 58% of the enterprises interviewed
- Innovation is rewarded in 60% of the enterprises however they are only institutionalised in 20% of all enterprises
- The use of brainstorming, creative project teams and other collaborative methods for generating and developing ideas tends to be quite a common practise amongst SMEs (Only 14% never used)

Quality and Continuous Improvement

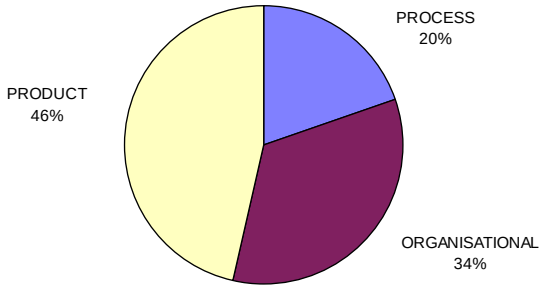
- Three quarter of all enterprises are contemplating investing in R&D and Innovation (Roughly in same Proportion)
- Resource deployed for R&D and Innovation low





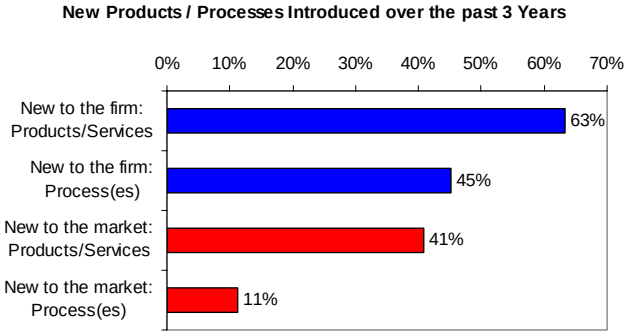
Quality and Continuous Improvement

- Innovation efforts are principally targeted towards product innovation



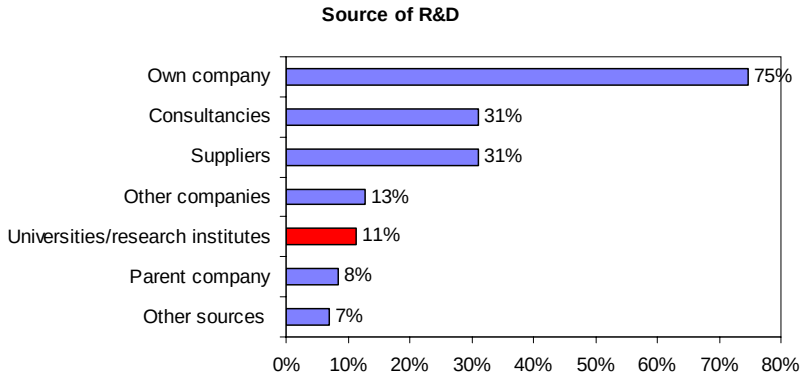
Success of Product and Process Innovations

- Relatively healthy level of innovation activity, but not all market-driven
- In 61% of enterprises this also led to an increase in turnover. 21% actually indicated a significant increase in turnover.



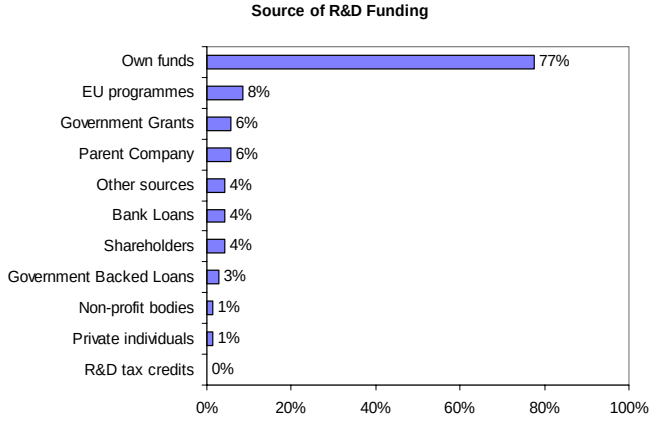
Success of Product and Process Innovations

- The source of R&D within the SMEs is principally from internal sources
- Reliance on universities and research institutes low



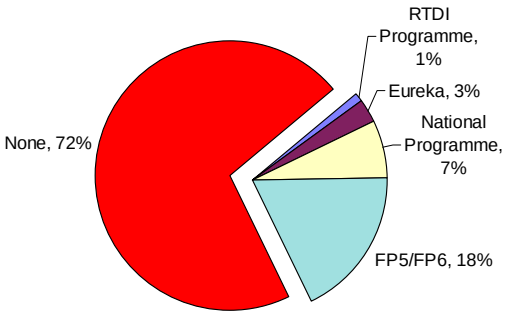
Success of Product and Process Innovations

- R&D is predominantly funded from internal sources
- Tax credits generally not utilise / considered to be funding



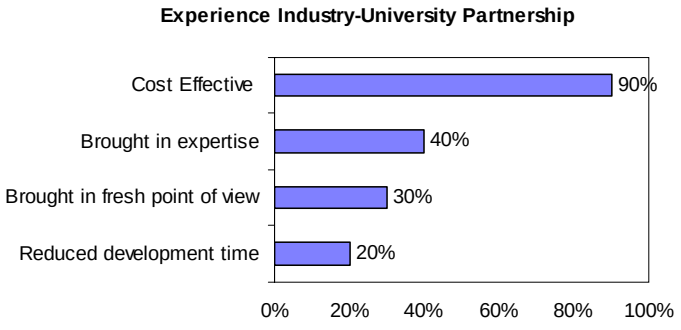
Awareness of Funding Opportunities

- General awareness of funding opportunities is low.
- Slightly over half of the respondents were aware of R&D tax credits and only 5% utilised these.
- Only 1 Respondent indicated that this had influenced his R&D spending.
- Awareness of other funding programmes is even lower. Nearly three quarters were not familiar with any of the programmes.
- Amongst existing programmes the FP enjoyed highest familiarity



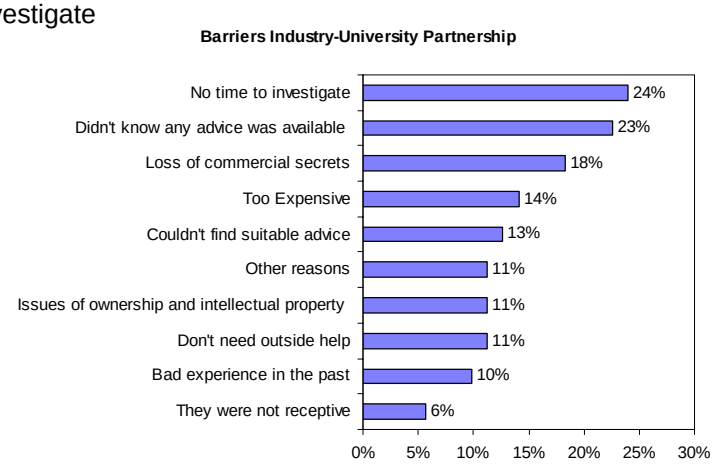
Alliances – University / Research institute

- 14% of the respondents indicated that they had worked with Universities or research institutes, most of which were overseas.
- The principal benefit they reaped from such a cooperation was financial in nature in the form of higher cost effectiveness



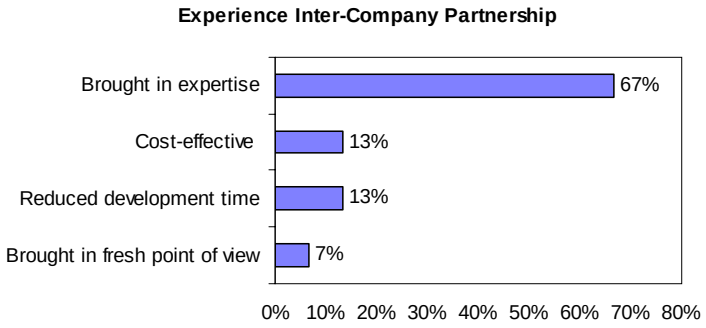
Alliances – University / Research institute

- Perceived barriers were principally in terms of lack of knowledge and time to investigate



Alliances – Inter-company

- 14% indicated that they had done joint R&D projects with other companies.
- The principal benefit of such cooperation had been in terms of the form of the expertise brought in by the partner



Alliances – Inter-company

- Key Barrier to such partnerships are principally related to loss of commercial secrets and issues related to intellectual property

Key Challenges

- Addressing the cultural issues in SME's hindering innovation
- Increasing awareness about funding opportunities and benefits of cooperation
- Creating necessary framework conditions to facilitate industry-university R&D Projects
- Addressing the legitimate concerns of Intellectual property rights and loss of commercial secrets