



# Which factors determine the upgrading of small and medium-sized enterprises (SMEs): The case of Egypt

Markus Loewe, Iman Al-Ayouty, Annegret Altpeter, Lisa Borbein,  
Marc Chantelauze, Maximilian Kern, Elisabeth Niendorf, Malak Reda

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# Agenda for today's presentation



1. The missing middle in Egypt and the importance of SME upgrading  
*Iman Al-Ayouty*
2. Conceptual framework on SME upgrading  
*Annegret Altpeter*
3. Research methodology  
*Maximilian Kern*
4. Determinants of SME upgrading in Egypt: Key findings  
*Marc Chantelauze, Elisabeth Niendorf*
5. Policy recommendations  
*Lisa Borbein*



# Why this topic in Egypt? (Relevance)



- Defined in terms of the number of enterprises engaged in economic activities, the missing middle problem is reflected in “the existence of a sizeable gap between the number of micro-to-small and large enterprises engaged in the respective activities”.
- Enterprises are defined using the **staff headcount ceilings** as per CAPMAS(close to WB ceilings):

	<b>CAPMAS</b>	<b>World Bank</b>
Micro	<5	<5
Small	<50	<20
Medium	<100	<100
Large	100+	100+



# The 'Missing Middle' Problem in Egypt



**Economy-Wide**, there is evidence of the problem as judged by the distribution of SMEs and their respective shares in total employment

Size	Number of employees	Distribution of enterprises in Egypt	Share of total employment
Micro	1 - 4	91.91 %	58 %
Small	5 - 49	7.82 %	22 %
Medium	50 - 99	0.13 %	3 %
Large	100+	0.14 %	17 %

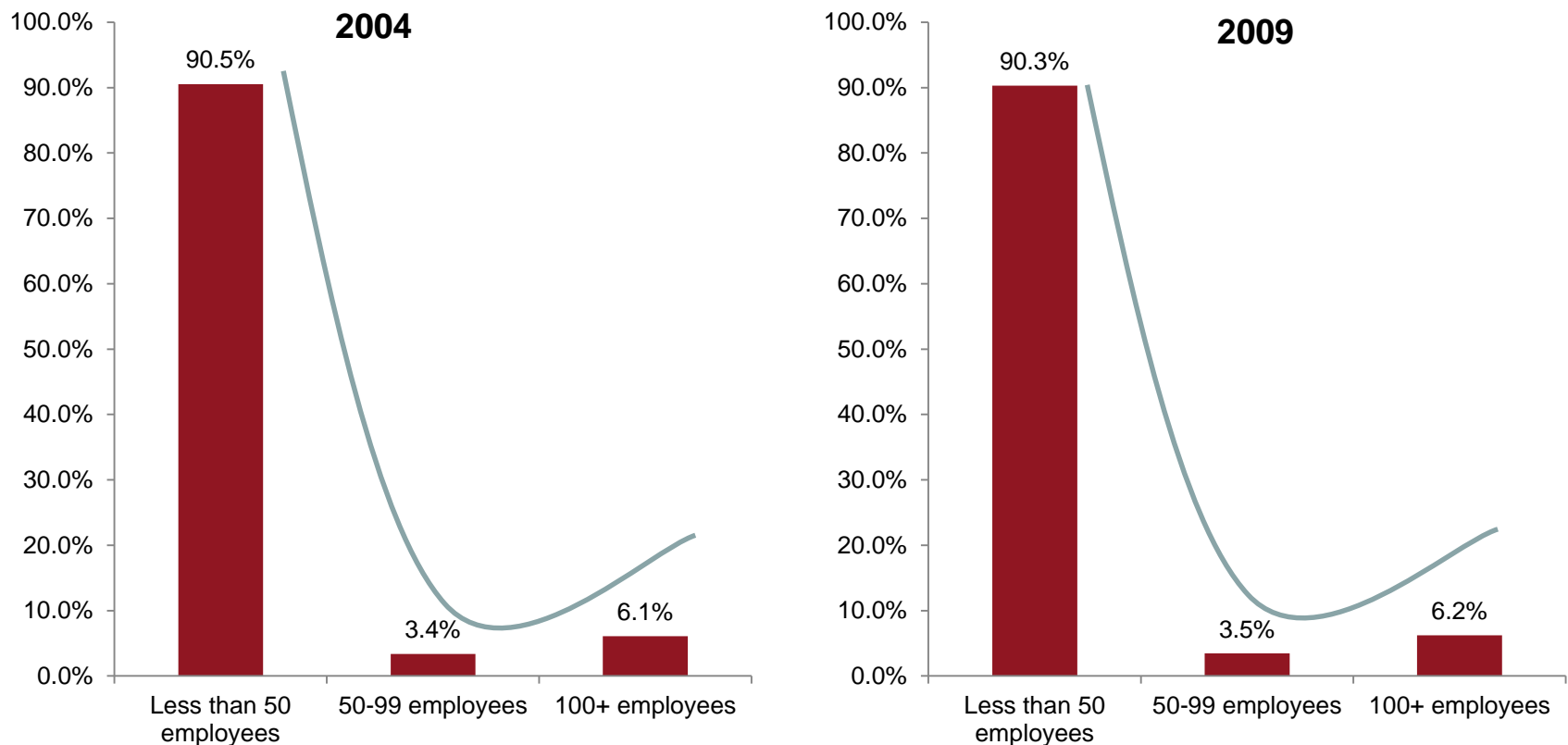
Source: CAPMAS Census of Population, Buildings & Enterprises (2006)

Concern over the missing middle problem stems from the implications of middle-sized enterprises for employment and income generation, exports, and other economic variables.

# Sectoral outlook: The 'Missing Middle' in Food Processing



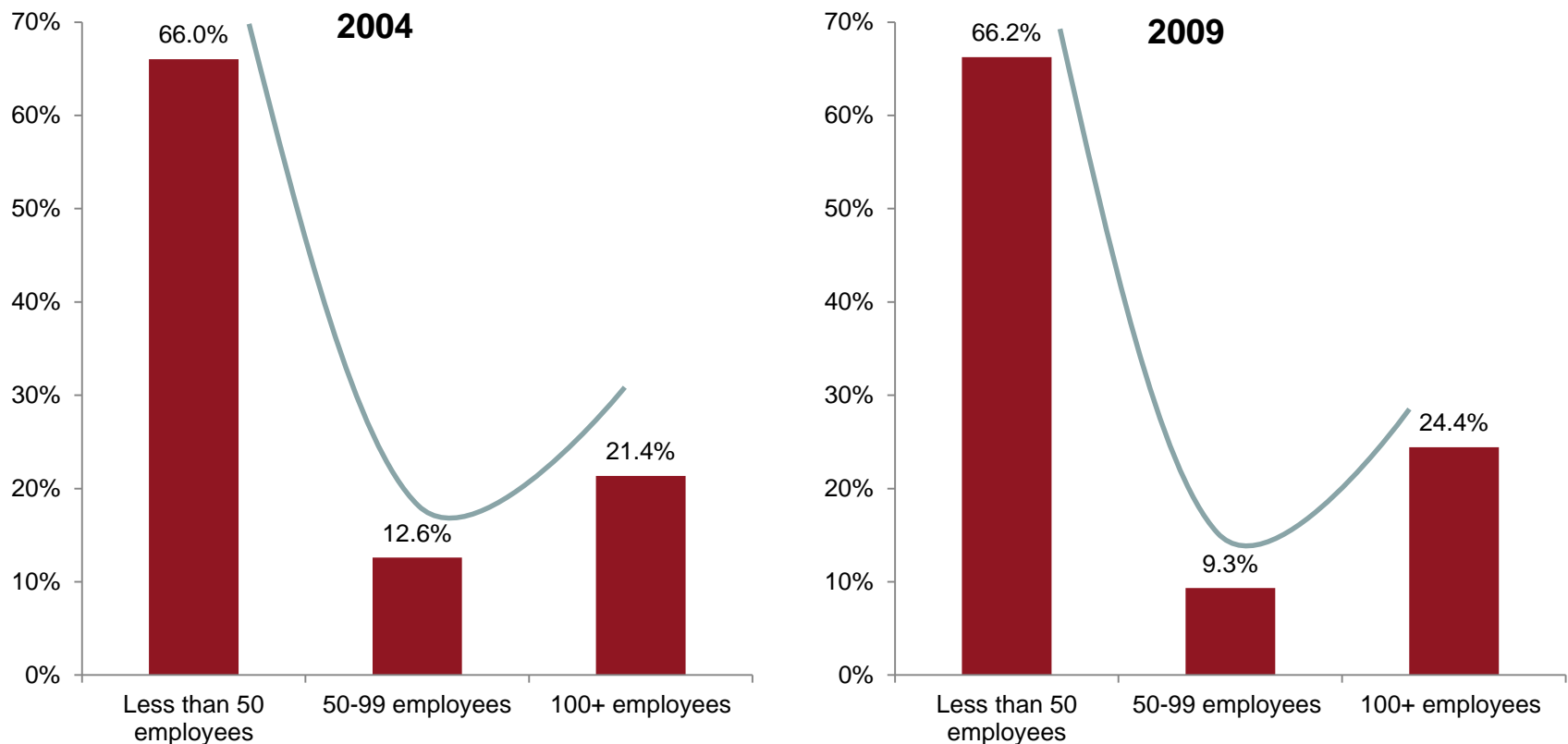
Share of different sized firms in the total number of firms in food processing, 2004 and 2009



Source: CAPMAS Annual Industrial Survey for public sector (2003/2004 & 2008/09) and private sector firms (2004 & 2009)

# Sectoral outlook: The 'Missing Middle' in Textiles and Garments

Share of different sized firms in the total number of firms in textiles and garments, 2004 and 2009



Source: CAPMAS Annual Industrial Survey for public sector (2003/2004 & 2008/09) and private sector firms (2004 & 2009)



- The U-shaped distributions reflect the relative lack of enterprises in the middle-sized category in both food processing and textiles and garments.
- There is evidence of the problem across time for both sectors.
- Missing middle appears to be more pronounced in the food processing sector (predominance of micro and small) compared to textiles and garments.
- The missing middle problem is not characteristic of Egypt alone, but of most developing countries (e.g., in the Philippines and India – these being two parallel study cases, employing similar methodology and undertaken by the DIE).





# Importance of the Middle-Sized Enterprises (1)



## Why are medium-sized enterprises important?

- **Resilience to cyclical fluctuations:** tend to exhibit lower vulnerability to external shocks (e.g., global financial crisis, 25<sup>th</sup> January revolution).
- **Creating better scope for the absorption of excess labour:** especially in the category of college graduates.
- **Employment creation:** As evident from the either economy-wide or sectoral outlooks, the bulk of employment lies in micro and small enterprises. Therefore, not only do middle-sized enterprises stand to play a role in creating employment, but more importantly ... quality employment which may entail **skill enhancement** and attainment of **decent work** (with implications for rights at work and working conditions, social dialogue and social security).



# Importance of the 'Missing Middle' Problem (2)



- ***Income generation:*** in terms of above average salaries for employees. Most people in the low and middle income category work in micro and small enterprises with low quality employment
- ***Export generation:*** ability to export their products either through engaging with domestic brokers liaising them with foreign buyers or through direct engagement with foreign partners
- ***Productivity enhancement:***
  - Total factor productivity has been found to be associated with a higher share of medium-sized enterprises in economic activity (Altenburg and Eckhardt 2006).
  - May, in turn, foster the ability to grow wages, such that workers are better compensated for higher quality and upgraded skills.



# Importance of the 'Missing Middle' Problem (3)



## *-Productivity enhancement (cont.)*

- May be associated with increased readiness to invest in R&D, with implications for knowledge accumulation, product, process and marketing innovation.

***-Technological absorption:*** bigger potential for absorption of imported technology with implications for productivity enhancement and spillover effects.

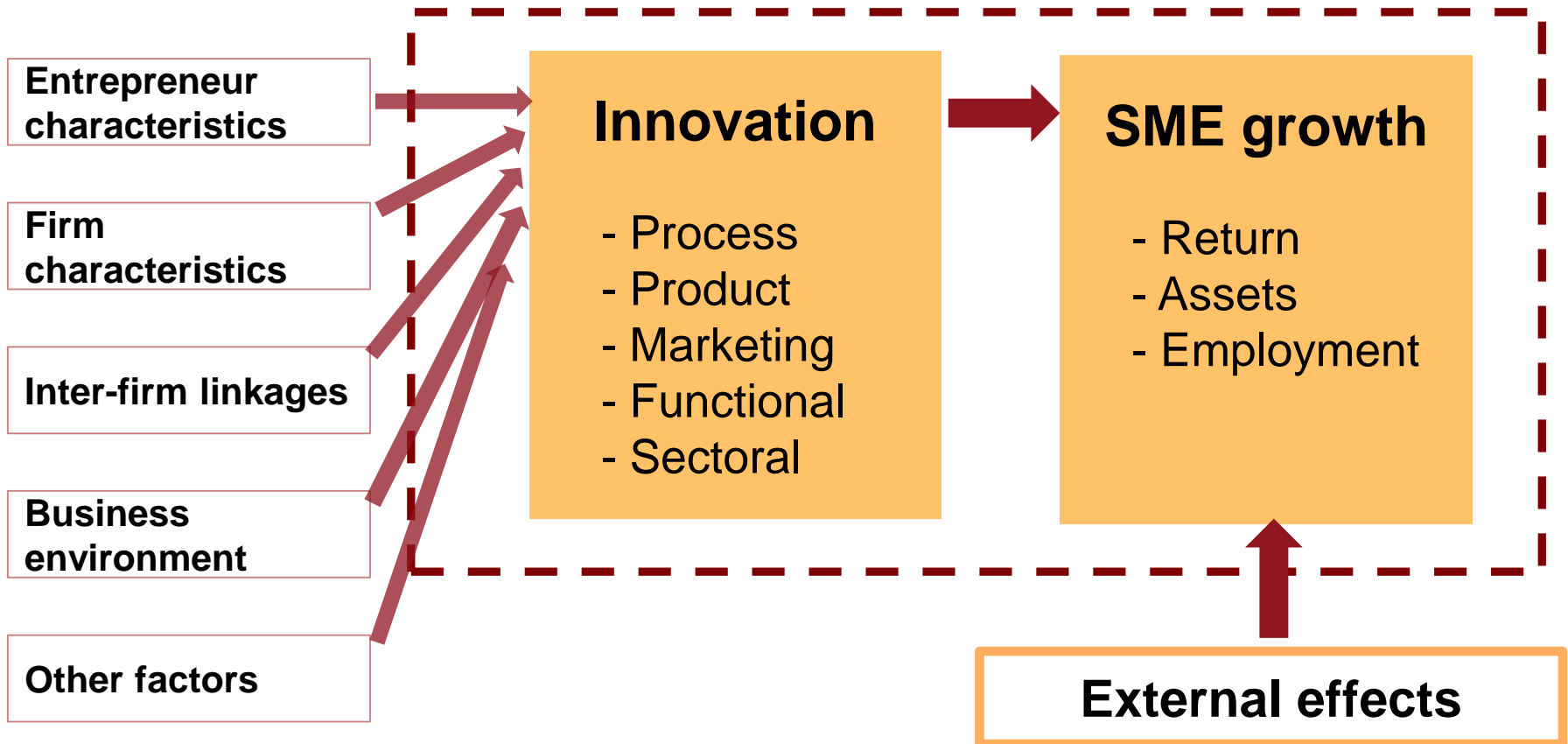
**- Finally,** given that most middle-sized enterprises are intrinsically founded as “middle-sized” (either through domestic or foreign investment), the research motivation is to closely examine what may allow/help the small ones **graduate/upgrade in the middle category so as to fill the “middle gap.”**



# What is SME upgrading and what factors can influence it? (Conceptual framework)



## Upgrading



Source: Own design, concept mainly coined by Humphrey / Schmitz 2003



- Regulation
- Taxation
- Political stability
- Corruption
- Skilled labour

## 4. Business environment

- Global Value Chains
- Cluster
- Formalised business networks

## 3. Inter-firm linkages

### Which are the most significant factors?

- Human capital
- Social capital
- Behavioural characteristics
- Gender

## 2. Firm characteristics

- Location
- Sector
- Informality
- Knowledge & information management

## 1. Entrepreneur characteristics

Source: Reeg 2011, adapted



## Which factors determine the upgrading of small and medium-sized enterprises (SMEs) in Egypt?

- Which factors explain why upgrading seems to be particularly difficult in Egypt in general? (*macro perspective*)
- Which factors explain differences in the ability to upgrade between different SMEs within Egypt? (*micro perspective*)



# How did we find answers to our questions? (Research methodology)





## **Approaches that we considered:**

### **Panel data analysis, but it has disadvantages:**

- Relatively old data
- Only a fraction of possible explanatory factors present
- Lack of informal companies
- SMEs frequently change their identity

### **Single round quantitative analysis, but not possible to:**

- Trace back causal links
- Account for unidentified variables
- Capture soft variables



**Therefore we opted for a compromise, including both a qualitative and quantitative element:**

1. Semi-structured interviews with 102 SMEs
2. In-depth interviews with 122 experts from the government, the private sector, civil society, academia and development cooperation
3. Econometric analysis of IFC enterprise survey panel data (2004/2008)

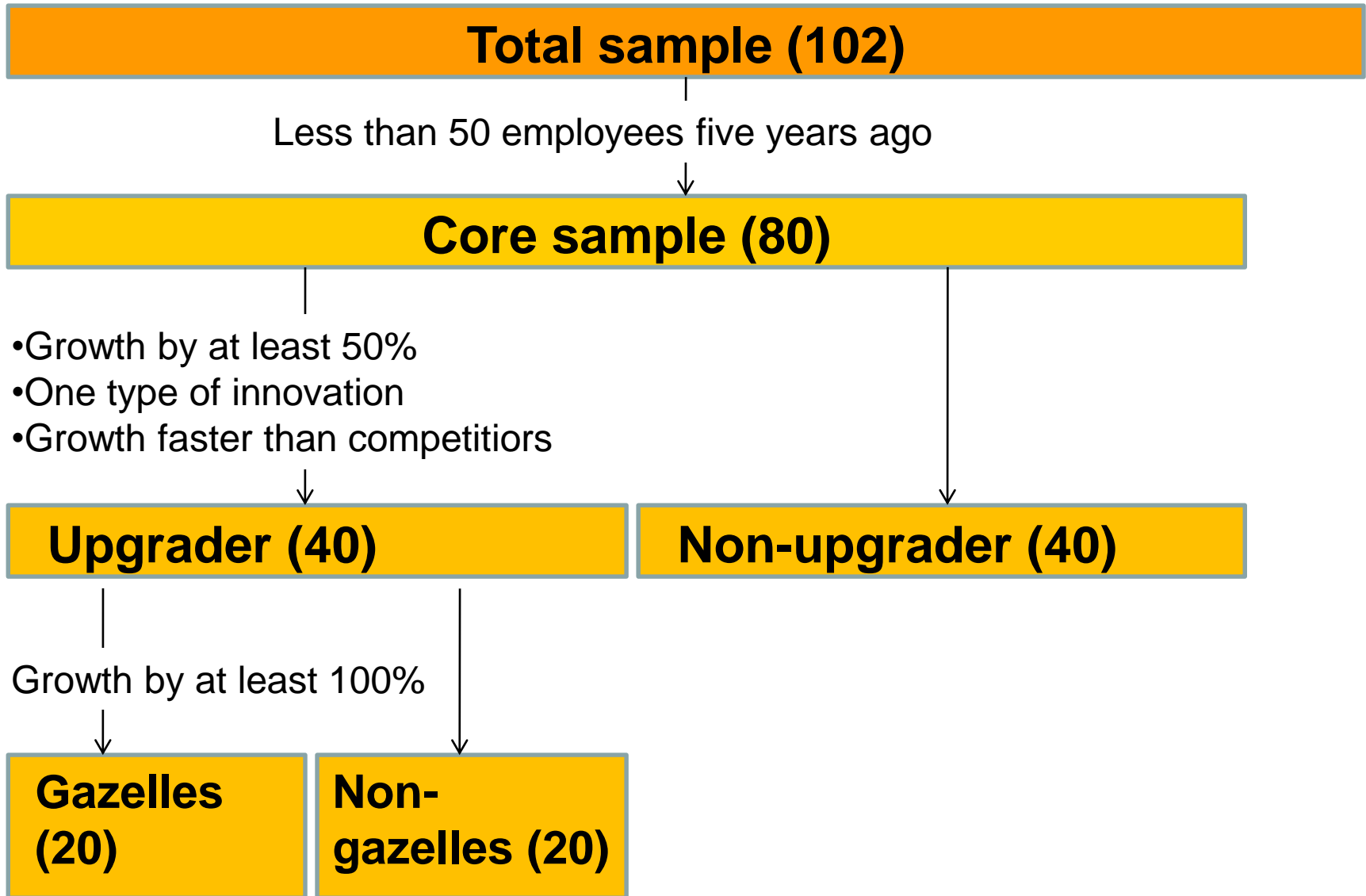


## **Three main objectives:**

1. Obtain information about the most important constraints and success factors of SMEs for upgrading
2. Learn about the main differences between the characteristics of 'upgraders' and 'non-upgraders'
3. Learn what kind of support SMEs would wish to have in order to be better able to upgrade

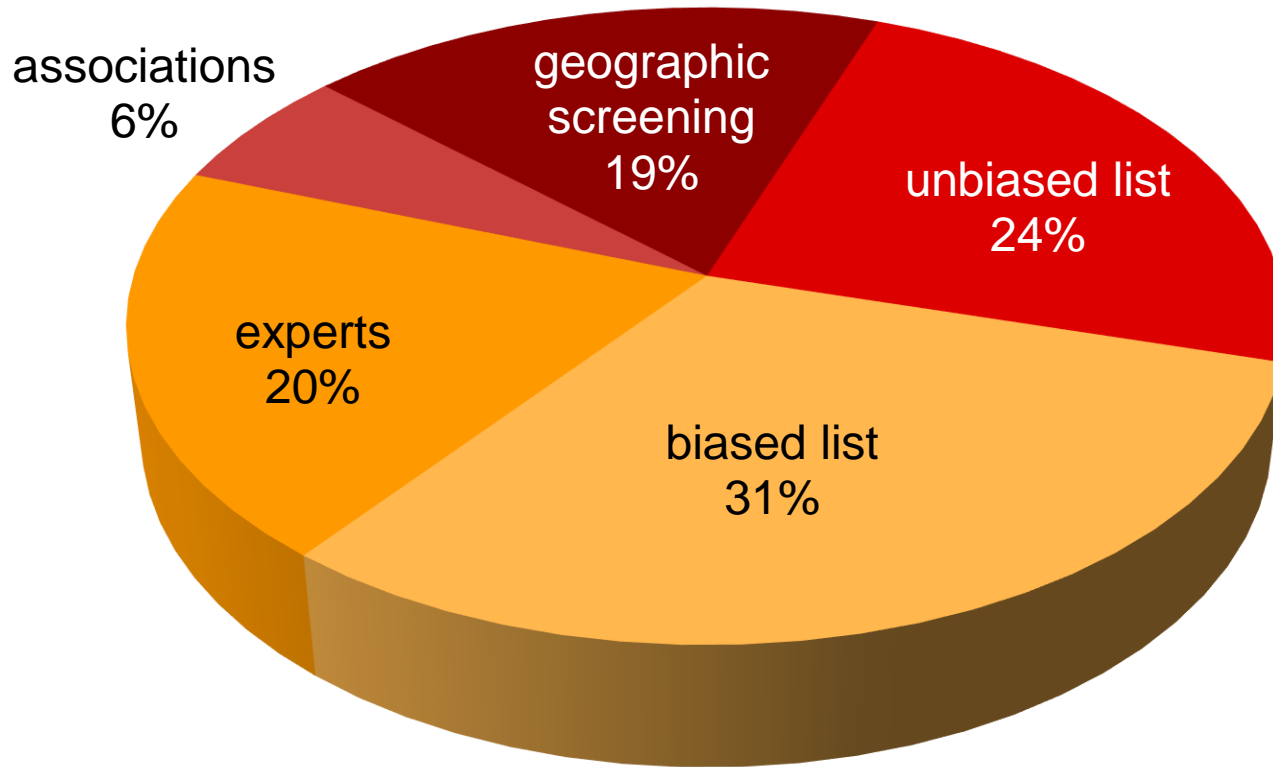


# SME interviews - classification





# SME interviews – selection methods





# SME interviews – sample composition



Characteristics	Our sample	Country level
<b>Sectors</b>	Food processing, textile & garment,  software development	Food processing, textile & garment make up 52% of all manufacturing SMEs
<b>Location</b>	4 governorates: Cairo, Giza, Sharqiyya, Gharbeyya	47% of all SMEs in Cairo, Giza, Sharqiyya, Gharbeyya
<b>Education</b>	69% have a university degree	73% have a university degree
<b>Gender</b>	16% female entrepreneurs	20% female entrepreneurs



Which are the  
main factors determining  
SME upgrading in Egypt?  
(Findings)



## Main determinants of SME upgrading in Egypt are:

- **Quality of education**  
(including training and work experience)
- **Human resource development**
- **Access to finance**
- **Market research**
- **International exposure**
- **Law enforcement**





## Identification of main factors:

### Step 1: mainly based on quantitative analysis

- Frequency of mentioning factors as a main obstacle or success factor
- Comparison of characteristics of non-upgraders and gazelles

Result: **16 intermediate factors**

### Step 2: inclusion of the results of the qualitative analysis of SME and expert interviews

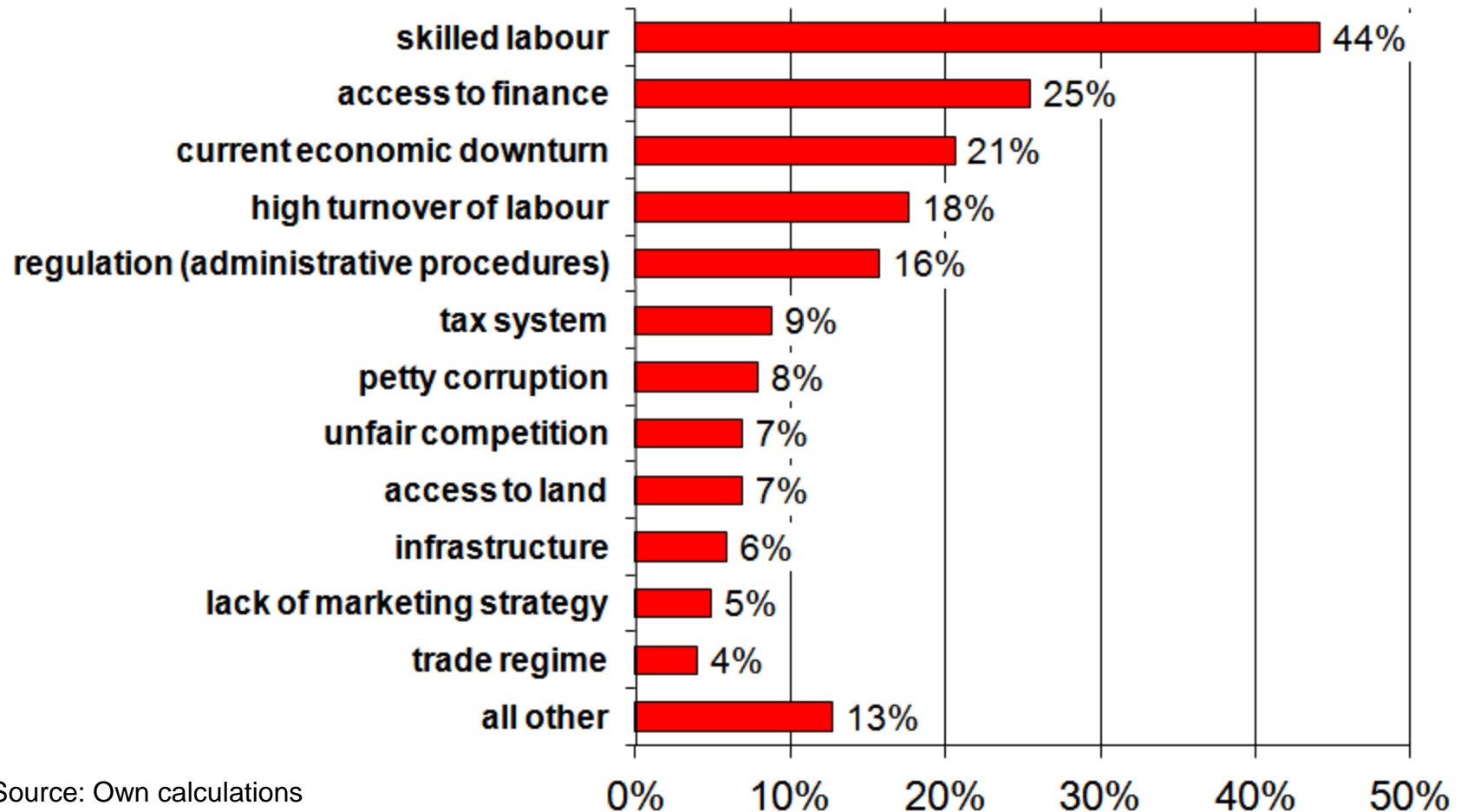
- Depiction of causal linkages in stories told by SMEs

Result: **6 initial (indirect) factors = the main determinants**



Step 1  
Visualisation

## Constraints for upgrading (according to SME owners in open question)



Source: Own calculations



# Factors of SME upgrading



Step 1  
Visualisation

## Success factors for upgrading (according to SME owners in open question)



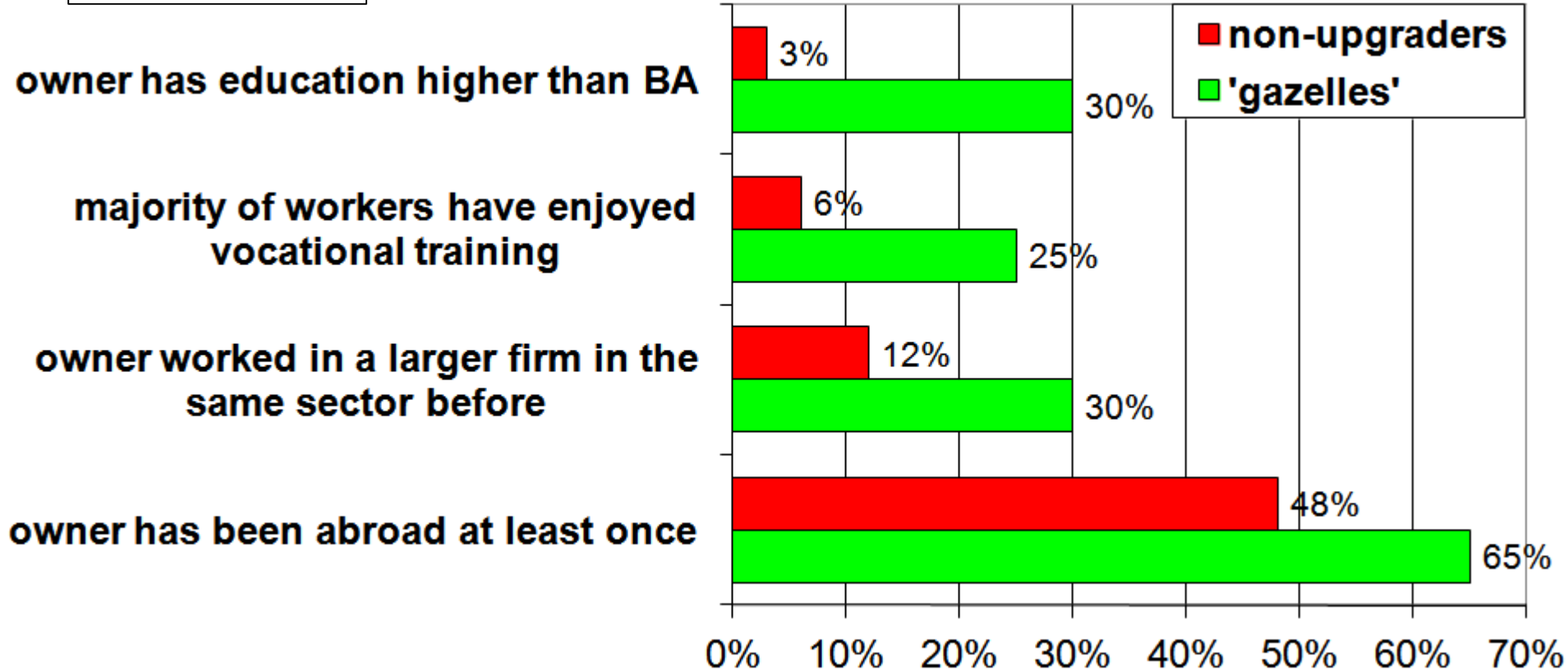
Source: Own calculations



# Factors of SME upgrading



Step 1  
Visualisation



Source: Own calculations



# Factors of SME upgrading



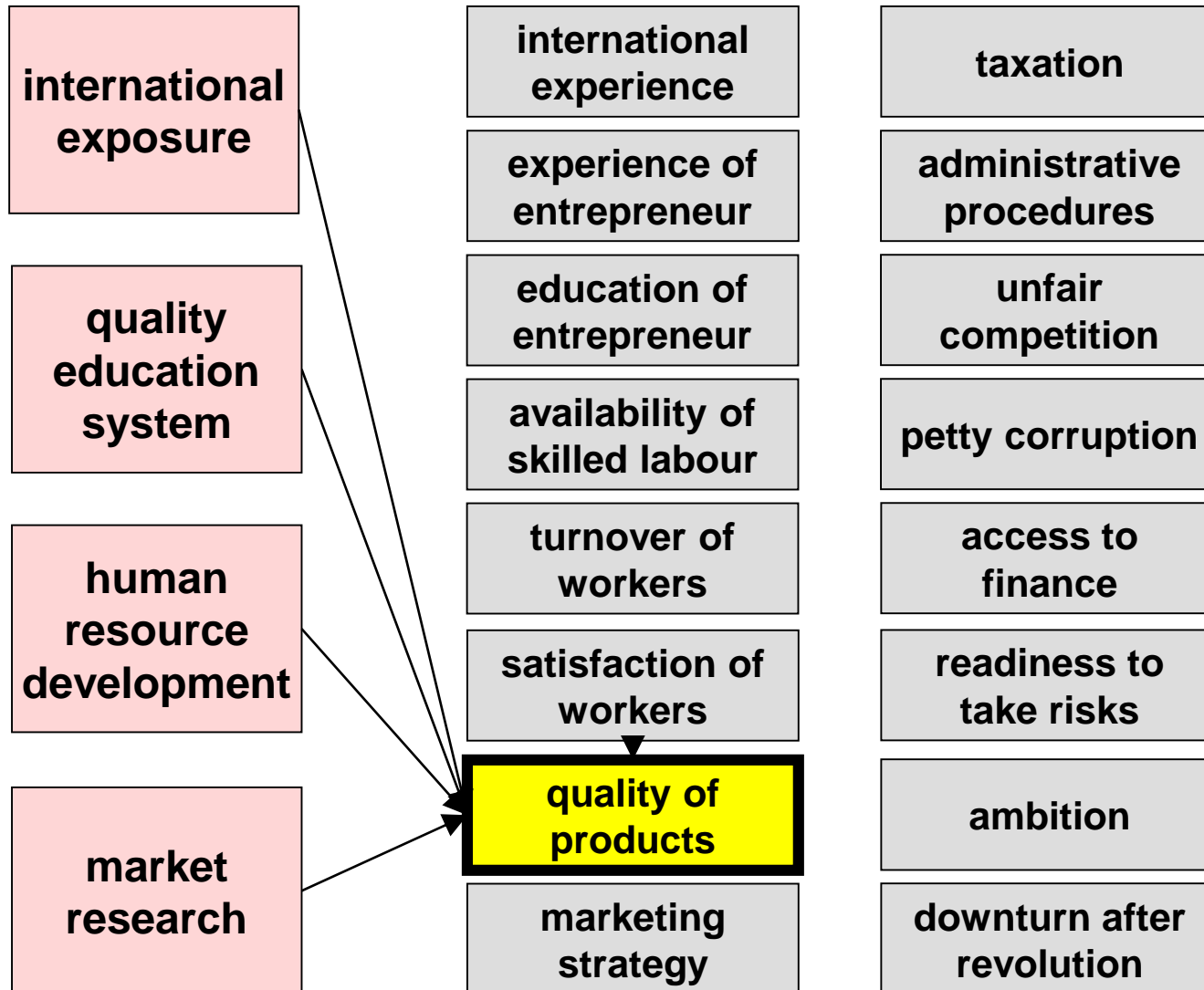
## Step 1- Result:

16 intermediate factors with direct impact on SME upgrading.

<b>international experience</b>	<b>taxation</b>
<b>experience of entrepreneur</b>	<b>administrative procedures</b>
<b>education of entrepreneur</b>	<b>unfair competition</b>
<b>availability of skilled labour</b>	<b>petty corruption</b>
<b>turnover of workers</b>	<b>access to finance</b>
<b>satisfaction of workers</b>	<b>readiness to take risks</b>
<b>quality of products</b>	<b>ambition</b>
<b>marketing strategy</b>	<b>downturn after revolution</b>



# Factors of SME upgrading



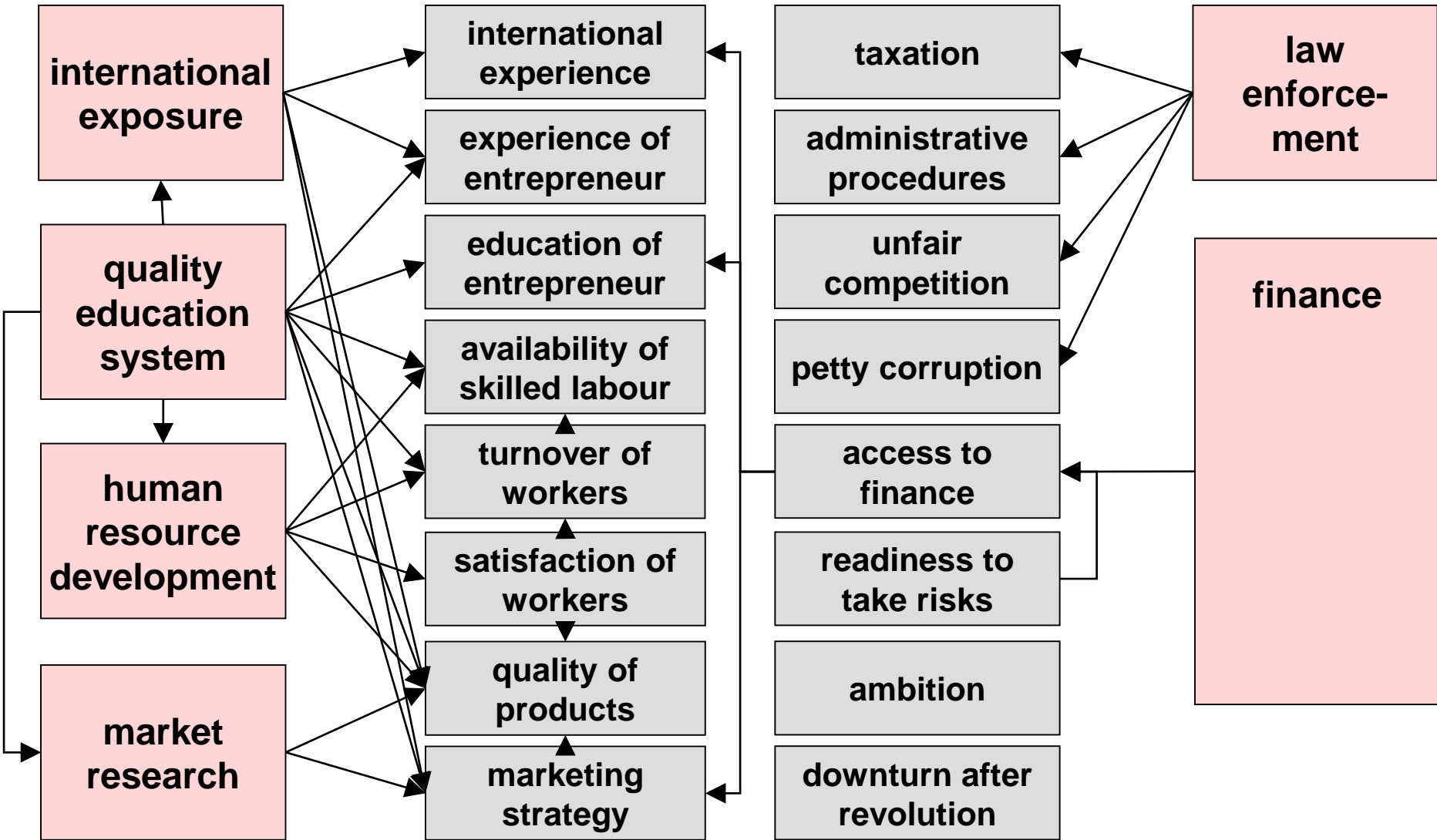
**Step 2:**  
Merger of  
quantitative  
and qualitative  
results.

## The example of „Quality of Products“

24% of the SMEs  
mention quality  
and continuous  
product  
improvement as  
success factor.

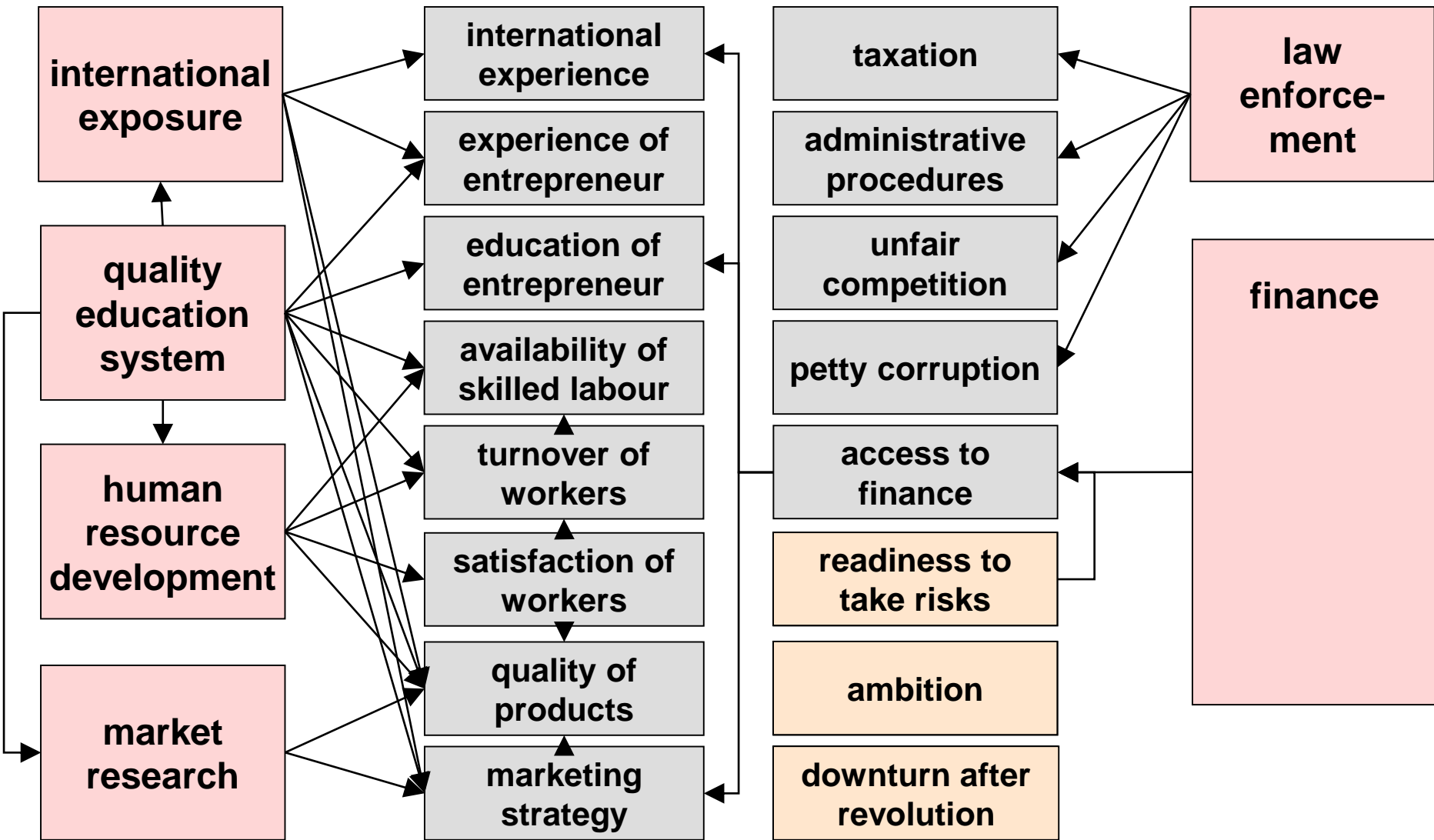


# Factors of SME upgrading





# Factors of SME upgrading







## Main determinants of SME upgrading in Egypt are:

- **Quality of education**  
(including training and work experience)
- **Human resource development**
- **Access to finance**
- **Market research**
- **International exposure**
- **Law enforcement**

**Further important, medium important and less important factors**



## Factor 1: Quality education system (including training and work experience)

### Direct effects of quality education system:

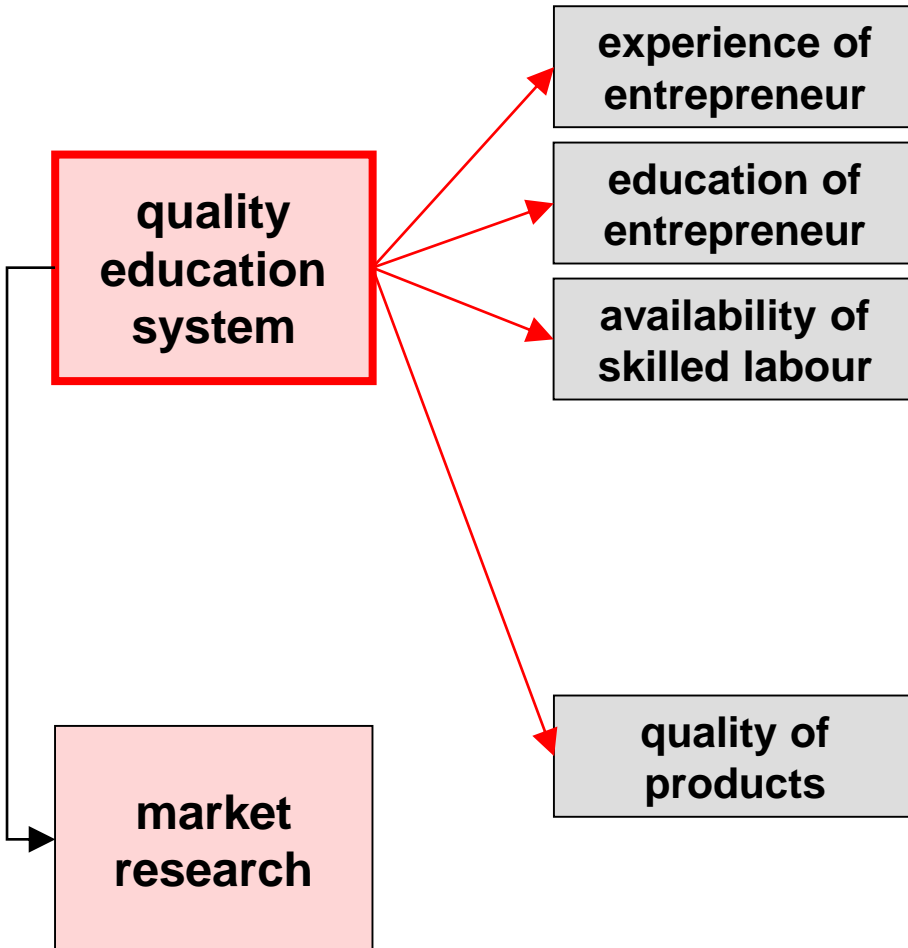
- Education: master's degree: 30 % of 'gazelles', 3 % of non-upgraders
- Work experience: SME owners with work experience in lead firm: 76 % are upgraders

*"I worked for a long time in a **multinational company** so I know the international language and the culture of the export business."*

(Food producer, 6<sup>th</sup> of October)



## Indirect effects of quality education:



*“The **education system** does not teach you how to market ideas, how to become a risk taker, how to transfer an idea to an output, how to get market information.”*

(Mona El-Garf, Cairo University)



## Factor 2: International exposure

### Direct effects of international exposure:

- Travel abroad: 65 % of gazelles, 48 % of non-upgraders
- International exposure is important for new ideas: 43 % of upgraders

*“I **travel a lot** to see what is new, I visit international trade fairs, I search for new designs, colours and materials.”*

(Textile producer, Cairo)

*“When my father was **in Holland** he visited a dairy goat farm and he liked the goat cheese. He thought to himself: Why should we not do the same thing in Egypt?”*

(Food processor, Cairo)



## Indirect effects of international exposure:





## Factor 3: Human resource development

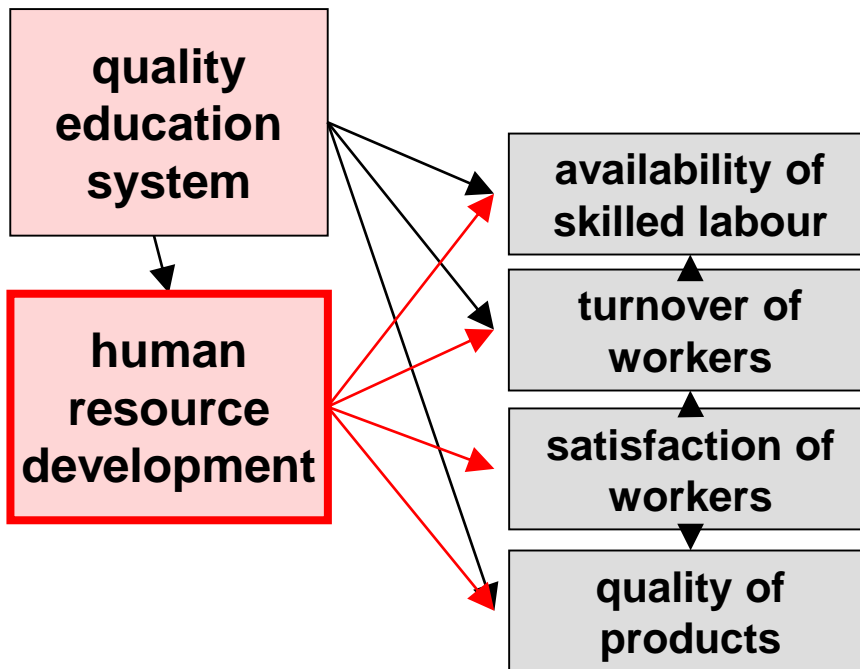
- Main obstacle: Skills and behaviour of labour was named by about 67 % of the interviewed companies

*“Graduates come fresh out of school or university and know nothing. We have to teach them and when they are finally trained, **they leave the company.**”*

(Food producer, 6th of October City)



## Effects of HR development:



*“Most of my employees stay for long time because I give them the **training**. I have a **good personal relationship** with them and I sometimes pay them **extra money as an incentive**.”*

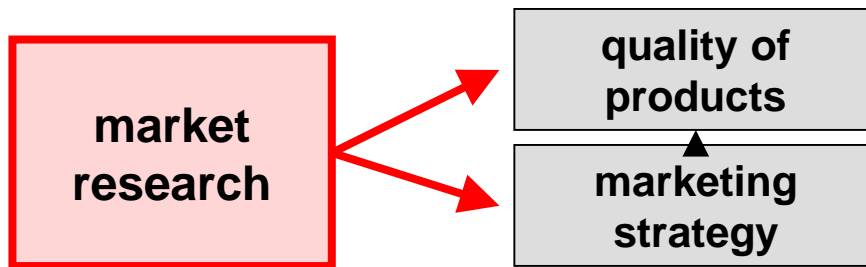
(Software producer, Cairo)



## Factor 4 : Market Research (MR)

### Effects of MR:

- MR: the main success factors for 18% of the upgraders
- MR enables to produce demand & customer preferences-orientated
- MR influences the quality of products



*“I went to cafes and restaurants and I recognized that 90 per cent of the restaurants in Egypt out-source desserts and I saw the need for a **high-quality product.**”*

(Sweets producer, Cairo)





## Factor 5: Access to finance

### Direct effects of access to finance:

- 33 % of SMEs identified access to finance as an obstacle for their growth

### **Correlation between access to finance and being a gazelle:**

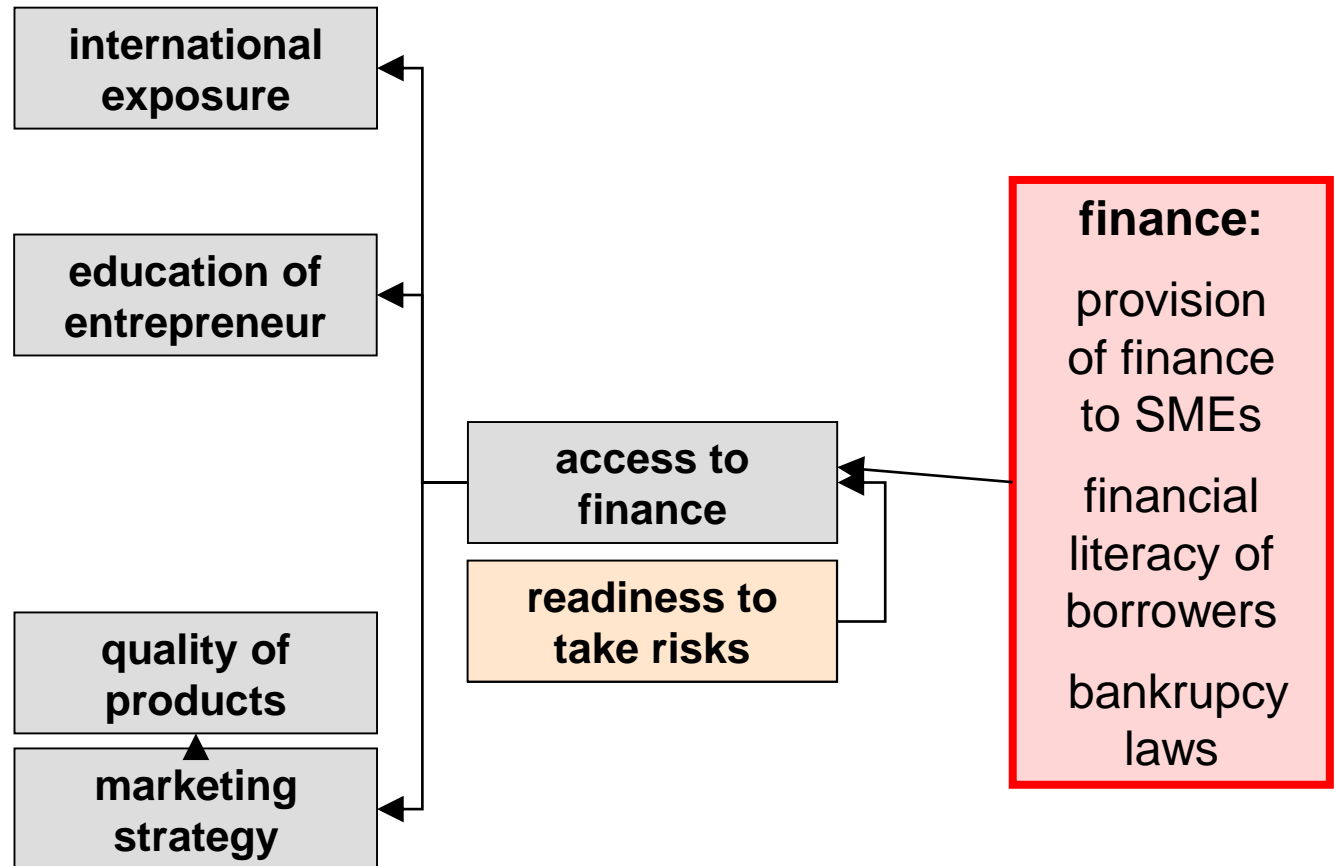
- 20 % of the gazelles considered finance as a success factor, while only 8% of non-upgraders did so.
- 15% of the gazelles had obtained a bank loan, while only 3% of the non-upgraders did so



# Factors of SME upgrading



## Indirect effects of access to finance:



**Access to finance is not only a matter of supply side factors, but also of demand side factors!**

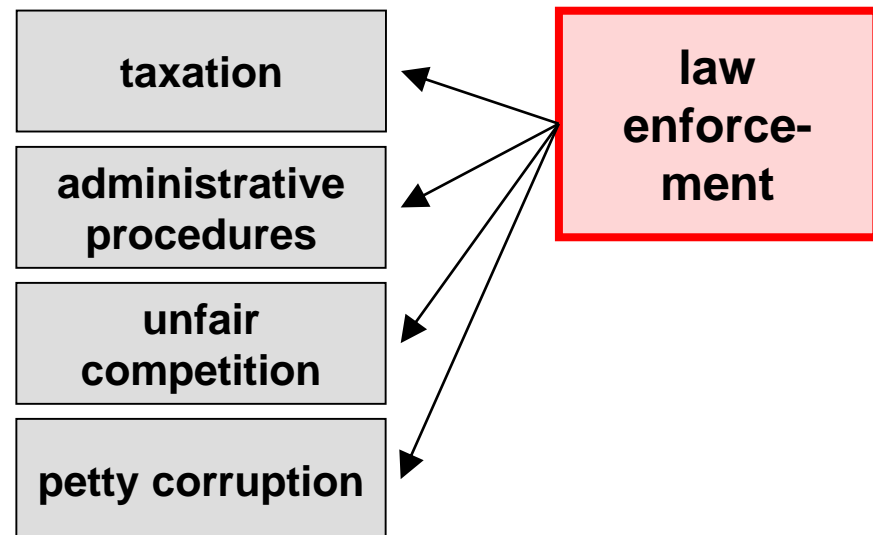


## Factor 6: Law enforcement

### Effects of law enforcement:

- The lack of law enforcement as well as arbitrary law enforcement indirectly creates obstacles to SME upgrading

**In state-business relations the main problem is risk due to the arbitrariness of law enforcement!**





# Overview of factors for upgrading



	Main determinant of upgrading	Medium important for upgrading	No evidence for role
<b><i>Business environment</i></b>	Law enforcement Access to finance Revolution	Access to land BDSs	Trade policy Infrastructure Insurance Exchange rate Inflation
<b><i>Inter-firm linkages</i></b>			GVCs Cluster Bus. networks
<b><i>Firm characteristics</i></b>	Market research HR development	Corp. governance Informality	Location Size Age Sector
<b><i>Entrepreneur characteristics</i></b>	Quality education Internat. exposure Ambition Risk taking	Social capital	Gender



# What could policy makers do? (Recommendations)



- **Improve the education system**
- **Increase linkages of SME owners to other countries**
- **Foster human resource (HR) development**
- **Promote the use of market research**
- **Facilitate the access to finance**
- **Strengthen law enforcement**



## Improve the education system

- Primary and secondary school: promote entrepreneurial skills among SME entrepreneurs (e.g. problem-oriented thinking, creativity)
- Commercial training centres: foster the training of managerial know-how
- Introduce a comprehensive vocational training system to promote employability

## Increase linkages of SME owners to other countries

- Promote exchange programmes in schools and universities
- Support business trips of SME entrepreneurs



## **Foster human resource (HR) development**

[Def.: training on the job, incentives, participation, recruitment]

- Promote awareness of SME owners for HR development
- Support HR development within firms

## **Promote the use of market research**

- Provide free access to market statistics and sector studies
- Promote activity of Egypt's Technology Transfer and Innovation Centres (ETTIC) and Chambers of Commerce in the field





## **Facilitate access to finance**

- Encourage SME lending
- Improve financial literacy of SME entrepreneurs
- Reform the regulatory environment (e.g. bankruptcy law)

## **Strengthen law enforcement**

- Increase accountability through positive incentives
- Increase transparency through e-government

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**Thank you very much  
for your attention!**