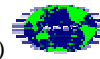


# **HUMAN RESOURCES AND SME's IN MEXICO**

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## HUMAN RESOURCES AND SME'S IN MEXICO

The significance of SME's in the global market has been increasingly recognised. In the APEC region, SME's make up 90% of all enterprises and are responsible for an average of 58% of employment in their respective member economies, contributing also with an average of 45% of the GDP and about 35% of the regions total exports.

Latin America is not exception to this, where around 20% of the enterprises are small and medium, and 90% are micro. The micro sector is composed mainly of selfenterprisers, family business, and economic units of around of 10 to 5 employees. In Latin America there are more than 50 million of this units, which employ more than 150 million people.

In Mexico as well, it is clear the great importance of the SME's. According to the 1994 statistics around 99.8% of the enterprises in México are SME's<sup>1</sup>, meaning around 2,400,000; out of these 99.8%, 98.8% are micro enterprises, 0.6% are small and 0.4% are medium. They employ around 78% of the economically active population, and contribute to 69% of the GDP. Approximately 32% are in the service industry, 12% in the manufacturing, 55% in commerce, and 1% in the construction.

The roll of the SME's is crucial to our economy in the actual competitive world and their contribution to growth and development is essential. It has been proved that SME's have a fundamental roll against the unemployment problem. Due to it's characteristics the SME's employ more people in proportion to the capital investment than large companies, are more flexible to adapt to the demand variations, innovate in smaller time gaps, can be located anywhere, and have the ability to integrate their productive process to those of bigger enterprises.

On one side we have the SME's that are the result of unemployed people, who do not have an opportunity in the formal economy, and are composed of nonqualified people, like the self employed people throughout Latin America. These enterprises have been the right place for a higher generation of employment to the lowest cost, working as a mechanism of income distribution to the low status of the society. And on the other side, there are cases in which they are dynamic entities that adopt flexible forms of specialisation in order to compete in the different markets.

In Mexico the sector of the SME's has grown considerably since the eighties, contributing in a more important manner to the creation of new employment than the bigger companies. Even though it has been consider in the last years a sector of great priority in the industrial policy, this has to be critically evaluated, due to the fact that there are still a lot of limitants that affect the productive units in this sector.

The diagnosis made here takes into consideration, in a general manner, the fact that the entrepreneurial development has been limited by two types of problems: the internal problems, theoretically within the control of the enterprises, like personnel administration, technology election, and the capability to use the information. And the

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<sup>1</sup> We consider micro enterprises those with 1-15 employees, we consider small enterprises those with 16-100 employees, medium enterprises with those from 101-250, and with a higher number they are considered big enterprises. There is another way of classification according to annual sales.



external ones, out of the control of the enterprises, like the structure of the market, the sources of information, the legal and institutional factors, and the official policies.

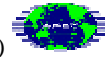
### **EXTERNAL PROBLEMS**

There are external problems that affect the productivity and efficiency of SME's and their human resources:

- Fiscal problems: high taxes alter the SME's cost structure, affecting their investment policy in human resources. There is a need to give some kind of fiscal stimulus or deductibility if SME's invest in training and modernisation of technology according to their size, activity and maturity.
- There are problems due to lack of information: SME's are not aware of the different existing programs for their support given by the government and other institutions. The chambers of the sectors are not accomplishing their roll of informing the entrepreneurs, due to the lack of sensibility and articulation between them and the needs of the enterprises.
- There is a lack of programs to support the SME's in different areas, like laboratories to certify quality controls, etc. There are a couple of programs to support them in the diagnosis of their enterprise, but they do not propose or take that diagnosis into practice.
- Financing problems due to high interest rates, lack of support for new projects, and lack of competitive instruments to finance SME's.
- Problems related with technological assistance, SME's have problems of access to technology due to a lack of knowledge and economic resources. The universities do not offer adequate solutions to technical problems in enterprises, and the support given for technological development, consultancy and assistance is mainly designed for big enterprises.
- Problems related with the legislation, which instead of supporting the SME's increase their operational difficulties.
- Problems related with the environment of the enterprises: corruption, bureaucracy, and the great amount of economic and political problems within the country.
- Lack of institutional support for SME's.

### **INTERNAL PROBLEMS**

The most important internal problems, which need to be solved are: the small priority assigned to human resources, which results in a low level of efficiency and make them unable to be competitive in the long run; the lack of qualified labour hand and managerial culture; the lack of a technological strategy and appropriate quality control practices; and the high percentage of idle capacity, amongst others.

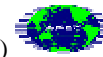


### **A study by NAFIN – INEGI outline the actual problems within the SME's:**

- Only around 40% of the SME's use technical criteria to set product prices.
- More than 50% of the SME's do not use any type of propaganda to promote their products.
- As a consequence more than 40% of the enterprises have excessive capacity.
- Around 60% are conscious of the need to expand and renovate their equipment, but more than 60% find it difficult due to high costs and lack of specialised people.
- Most of these enterprises use their utilities mainly to buy raw material.
- Only around 15 % know about the need of training in production.
- Around half do not ask for loans, due to high interest rates, paper work, and being afraid of not having payment capability.
- General:
  - Lack of interest by the entrepreneur for group work rather than individual
  - Lack of negotiation capabilities due to its reduce scale, its lack of organization and limited management
  - A tendency to improvisation
  - Restricted participation in the markets
  - Lack of input due to small scales
  - They have to many products, they are too diversified.
- Problems related to education:
  - Lack of link between universities and enterprises in order to adapt their needs to the study plans and research programs of the universities.
  - Lack of training and qualify labour hand that can face the challenges of globalisation, lacking the qualifications and the attitude to understand what is being competitive all about.
  - Lack of managerial culture, capabilities as important as administration, marketing, financing, and management of human resources.
  - The importance of human resources is only in matters of speech, because in reality there is low investment in recruitment, training, and remuneration of personnel.



- The average age of the entrepreneurs is 35 years old with an average education as follows: In the micro enterprises 38.3% have a primary level or under and 18.3% have a professional level; in the small and medium enterprises only 5.2% and 1.9% respectively are under the primary level, and 55.4% and 63.4% have a professional level.
- There is a lack of interest in entering other markets; around 8.8% are not interested in exporting, 68.8% have not exported, 13.5% do export. Around 56% do have or will have in the short run an export capacity.
- In the area of technological capabilities, the SME's have the following problems:
  - Most of them define a development strategy, but due to lack of co-ordination they have a low level of efficiency in the achievement of their objectives.
  - The use of computers is mainly for administrative uses.
  - There is not define technological strategy, it has no congruency with the global objectives.
  - The use of obsolete machinery and equipment is very common and there is not much investment in its modernisation.
  - Only around 40% of them have an established plan for the development of their suppliers, most of them do not have any kind of communication which would help them have mutual benefit.
  - SME's have a high percentage of idle capacity.
  - Most of their quality control practices are based on the detection and correction of problem.
  - The financing strategies of most of these enterprises is very conservative, they do not use the different instruments of support given by the commercial and development banks.
- Problems related to equipment:
  - One of the most important problems within the SME's is the lack of conscience to expand and renovate their equipment, technology and productive process. Only 34% of the micro enterprises do consider this, 54% of the small and 62% of the medium do as well. The main difficulties to achieve this are the high costs and the lack of qualified people. It is important to consider that 50% of the enterprises do not have idle machinery, but those who do have this idle machinery, do not use it productively.
  - The micro and small enterprises invest most of their utilities in raw materials, while the medium enterprises invest mainly in machinery.
- Problems with human resources:



- There is very low efficiency of direct and indirect labour hand; SME's face a big problem of rotation and absenteeism, due to salary aspects and lack of training. There is a high percentage of absenteeism, which represents around 42% of the labour problems, followed by high rotation that is in average around 38% and training problems, which are around 26%.
- Around 72% of the medium enterprises have received some kind of training, 64% of the small enterprises and only 19% of the micro enterprises. In their opinion, training is needed mainly in marketing, administration and production. It is important to mention that ¼ of the entrepreneurs do not know where training is needed. Regarding the technical assistance, they think this type of training should focus on the production area and quality control, while 41% of the entrepreneurs ignore which type of technical assistance they need.
- Around 48% of the small and medium entrepreneurs believe that the training of their personnel, the optimisation of the resources and the specialisation of their activities are the most viable alternatives in order to stay in the market and grow. In counterpart, only 17.2% of the micro enterprises believe that training of their human resources is needed for success.
- Nine of every 10 enterprises know of the need to improve quality in order to survive. Around 62% of the micro enterprises know that human resources contribute to the achievement of the quality objectives, while in the small and medium enterprises this percentage grows to 93%. In the micro enterprises only 37% of them have develop a process to know if their human resources are satisfy in their job, while 3 out of 4 small and medium enterprises do have a process.
- SME's in Mexico train their employees in an informal manner, according to their resources and capabilities. In 1991, there were 138,774 enterprises in the manufacturing sector, of which 87% where micro, 9% small, 2% medium and 2% big; employing 15%, 18%, 16% and 51% respectively; and of which the percentage of enterprises that train their employees represented 7%, 52%, 76%, 90%.

The lack of training in small and medium enterprises reflects the lack of culture in this sense, and as well the lack of resources. As the size of the enterprise decrease, the informal training increases. This informal training takes place through an experience work peer, in labour competencies according to their resources. Statistics also show that the percentage of training increases as the educational degree increases and as the responsibility in the job increases, while the lower levels lack training.

<i>Associated with cost factors</i>	<i>Associated with production management</i>
High costs of materials and components	Low efficiency of the direct labour force
Idle capacity	Obsolete technology
High taxation	Maintenance and repair problems
High transport and communication costs	Low efficiency of the indirect labour force
High interest rates	To many products

## SUPPORT PROGRAMS



Regarding to human resources, elevating the productive potential of the labour force is crucial for the SME's in Mexico. In this sense a strategic instrument of the industrial policy needs to promote the opportunities for the technical formation and training of the employees. Even though Mexico has important and successful programs for these means, we need to recognise that in relation with the actual needs of the country, these efforts are still limited.

The government intervention in the training programs has been fundamental and has been justified due to the need of cheap training in public institutions, the lack of sufficient training by the private enterprises, and due to the need of training to all levels. The public training needs to focus on the support to employees of low income, and to increase the labour competencies of their employees.

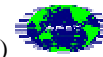
Mexico's problems regarding labour training are not only quantitative; there are still many others: there is a lack of co-ordination between the efforts of the public and the private sector, substantial differences between the training programs offered and the market needs, lack of knowledge of the actual competence that the productive sector demands, lack of mechanisms to recognise these competence and abilities which are acquired informally or on the job. These programs are sometimes too sophisticated or require too much paperwork, they have low diffusion, co-ordination and evaluation

It has been proved that the rate of return on training is economically profitable, not only for individuals but as well for the society as a whole. The most profitable investment in human capital is in work training (21%), translated into an economical benefit to the employee, and a productivity benefit to the employer.

In México there are more than 3,600 support private and public programs, but it's cover, range and resources just satisfy around 3% of the market. Just to give an example there are 12,000 consultors and we need around 80,000.

Support programs in Mexico:

Institution	Program	Objectives
Nafin	<ul style="list-style-type: none"> <li>• Rental</li> <li>• Promyp</li> <li>• Promin</li> <li>• Prodem</li> <li>• Prodeg</li> <li>• Pice</li> </ul>	<ul style="list-style-type: none"> <li>• For machinery</li> <li>• Loans for work capital and investment</li> <li>• Loans for technological development</li> <li>• Enforce the managerial profile of SME's through training programs.</li> <li>• Complement the guarantees required by the banks.</li> <li>• Program for the development of suppliers.</li> </ul>
Secofi	<ul style="list-style-type: none"> <li>• Compite</li> <li>• Crece</li> </ul>	<ul style="list-style-type: none"> <li>• Seminars to analyse their production line problems</li> <li>• Specialised consultancy to elaborate a diagnosis of the</li> </ul>



	<ul style="list-style-type: none"> <li>• SIS</li> <li>• PDR</li> <li>• Funtec</li> </ul>	<p>enterprises and technical advisory.</p> <ul style="list-style-type: none"> <li>• An information system to establish links between enterprises.</li> <li>• Program to explore and exploit the potentialities of each region.</li> <li>• Funds for research and development</li> </ul>
STPS	<ul style="list-style-type: none"> <li>• CIMO (STPS and WB)</li> <li>• CONOCER</li> <li>• PMETYC</li> </ul>	<ul style="list-style-type: none"> <li>• Supports the personal development, and the quality, productivity and competitiveness of the enterprises, through training, information, specialisation and process consultancy.</li> <li>• Revalue the importance of the labour capabilities, and transform the traditional process of training and technical education.</li> <li>• A plan to improve radically the labour competencies</li> </ul>
Conacyt	<ul style="list-style-type: none"> <li>• Fidotec</li> <li>• FFCCT</li> <li>• Preaem</li> <li>• PAE</li> <li>• RCCT</li> </ul>	<ul style="list-style-type: none"> <li>• Fund to foment innovation investment in the private enterprises.</li> <li>• Fund to support the creation of research and development within SME's.</li> <li>• Promotes the links between the academy and the SME's in joint projects.</li> <li>• Events that promote the links between the industry, organisms, and research institutes.</li> <li>• Gives access to specialised information for the development of innovative capabilities.</li> </ul>
Bancomext	<ul style="list-style-type: none"> <li>• Loans</li> </ul>	<ul style="list-style-type: none"> <li>• For imports and exports</li> <li>• Training</li> <li>• Promotion and diffusion</li> </ul>

Source: Diverse, 1995.





### Support programs and policies to the SME's in Mexico:

- The different programs established need to be consistent with the needs of the enterprises, need to be continuous and to focus on a long-term vision. Continuity gives enterprises security and certainty, and the ability to innovate and adapt to future challenges.
- They also need to be very specific according to sectors, and by subgroups divided by areas of economic priority, in order to establish the needed programs.
- They need to focus on competitive enterprises that can really take advantage of them, companies with a global vision capable of transforming threats into opportunities, and able to respond to the challenges of globalisation.
- These programs need to be elaborated with the direct participation of the entrepreneurs, in order to identify their problems and needs.
- In order to launch successfully these programs we need human and economic resources, but we need as well the right administrative practices, the technological and training instruments, and good operational programs and practices to achieve them successfully.

We have the need to elevate the effectiveness and efficiency of the programs and projects for the development of the SME's, in order to solve the problem of fragmentation of the different institutions in Mexico. In order to achieve this it is necessary to promote communication and interaction between the public and the private sector, apart from facilitating the diffusion of organizational know how and the infrastructure of cooperative interinstitutional networks.

### **SOLUTIONS**

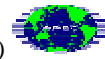
Based on a thorough study of the SME's in México, their importance, their characteristics, and their problems, I have study and outline a series of solutions according to our reality, needs, and resources in order to support the SME's and their human resources.

To start with, the industrial policy in Mexico needs to include a group of activities related with the macro aspects, or aspects that permit the existence of efficient markets that allow an adequate resource allocation. And the micro aspects oriented to guarantee the entrepreneurial and collective capabilities in order to consolidate an industrial environment.

There is the need to solve the external problems in order to have positive spill over in the internal structure of these enterprises. Each country needs to develop its right support policies in a national scale, and at the same time, concentrate a joint effort to give coherence, integration and expansion to these policies, increase the base of information and guarantee the regional exchange and the entrepreneurial cooperation within the country.

### **Government actions to improve the industrial policy:**

- Macroeconomic stability and financial development



- Improvement of infrastructure and institutional base
- Promotion of productive networks
- Improvement of the technological industry development
- Economic deregulation
- Promotion of exports
- International business negotiations
- Competitiveness promotion

### **Mechanisms that reinforce the interaction of the enterprises with the government**

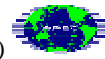
- There is the need to reduce the great amount of bureaucratic procedures in order to promote the formation of enterprises and allow their efficient operation by having quick mechanisms to respond to their needs.
- Information booths that facilitate the access to database that can facilitate useful information to the entrepreneurs.
- Revision and adaptation of government program, identifying those that are repeated and launching new programs to fill in the urgent gaps.
- The great need to increase the number of supporting industries for the SME's.
- There is an urgent need to establish links between different institutions in order to provide a complete network of support to these enterprises.
- Subcontractors or industrial linkage like the Japanese where 55% of the SME's are connected with the big enterprises.
- The organization of forums and conference where the enterprises can propose their needs to the government.
- Establishing instruments that promote synergies within the different institutions involved in this process.

### **Instruments to reinforce the management capacity**

- The idea is to identify the real training needs, and then assign resources to satisfy them. Training in finance, management of human resources, decision making, use of information.
- There is the need to invest more on the youth, the human resource problem in SME's is a problem of education and of behaviour, if we invest now in behavioural changes even though the results will be shown in the long run, our new generations will be aware of this problem.



- The need to train the SME's in subjects related to internationalisation and external expansion of markets, external opportunities and exporting strategies.
- Assistance in the elaboration of proposals, negotiation and development strategies.
- Promotion of technology transfer through a technological diagnosis, a systematic evaluation of the organization to determine their capacity of commitment and abilities, and the financial support.
- Promotion and diffusion of good entrepreneurial practices, by learning from successful experiences, studying them, and applying them to other enterprises. Example of this have taken place in Oaxaca and Guanajuato, where the government has been establishing some training schemes, were a research institute in joint action with the local government have exchange managers with Japan, with the idea of learning from the Japanese networks, in order to establish them in Mexico.
- Organization of forums and conferences to teach new methods and concepts, and administrative practices to the entrepreneurs.
- Support Programs of research and development: Financial support for innovation programs, transfer and adaptation of technology, evaluation of feasible projects of expansion and diversification, etc. The idea is to give as well technical and industrial advise with experiences people from universities, research institutions, and private consulting firms, who help them to get information, define their needs, establish contacts, formulate projects, and integrate their technology.
- Programs that promote the links between universities and industries through which exchanges of technical and scientific personnel can be done, the formation of work groups between the university and the industry members, and joint research programs.
- More universities of technical education
- Hiring of foreign experts in order to train their people
- Government programs in order to train unemployed professionals so that they can give consultancy of training needed for SME's.
- Universities that work in co-ordination with the SME's in order to satisfy the needs required within these enterprises, and the implementation of consultancy and training programs, at reasonable prices, in order to support the companies. It is also very important for universities to teach their alumni of the importance of the SME's and their human resources in our country, so that they promote and support their activities once they are part of the work force, either as entrepreneurs or as employees.
- Entrepreneurs should involved as well in a more direct way; not only by increasing investment in training their human resources, but also by organizing



courses in which they participate as instructors, in a way that they can share their knowledge and experience.

### **Instruments to have a greater access to the markets**

- Having better information and diffusion sources.
- Assistance in the fulfilment of requirements in order to facilitate things for the entrepreneurs.
- Government purchasing with minimum requirements and quick payment mechanisms.
- Training in the adoption of a commercial strategy is needed to have access to other markets; this strategy should include marketing, distribution and commercialisation, practices.
- The promotion of technology and computers in order to create an electronic market.
- Programs which are focused to develop SME's as government suppliers, by searching them, giving them the same opportunity to be subcontractors, by giving them advice of how to negotiate with the government, etc.

### **Increase competitiveness**

- Create the conditions for the direct and indirect exports
- Accelerate the mechanisms for the development of industrial, regional and sectorial networks, with high international competitiveness, and highly integrated relations.
- Promote the development of the internal market, as the base to achieve their international insertion.
- Information Access: An information center for SME's where they can have an answer to all their questions related to the beginning of a business, operational problems, tax information, support programs, etc.

### **Financing Instruments to support them**

- Low interest rates and low taxes for those SME's that are assigning resources for the development and training of human resources, research activities, technology modernisation and implementation.
- More economic resources assigned by the government to SME's and a bigger budget assigned to the training of the human resources.
- Mexico should benchmark the different fiscal systems and an incentive given to SME's within other countries in order to adapt them to our own. There is a need of more and better incentives to these enterprises so that their cost structure is reduce and could be assigned to the development of human resources, amongst



other things. These incentives could be assigned to those enterprises that somehow use the government programs to train their human resources.

- There should be loans at competitive rates so that SME's can use these loans to modernise their technology and their human resources.
- Other programs of financial assistance: Creation of investment networks between public and private institutions that can increase the disposition of capital to those credit entities that give loans to SME's.

### **General training or workshops to promote the importance of SME's**

- Giving a diagnosis to the entrepreneurs
- Sensitise government employees, entrepreneurial leaders, and the general public of the importance of the development of SME's.
- Make consensus about the necessary alternatives to foster the SME's
- Propose regional and sectorial specific projects.
- The government should give much more economical support and promotion in order to create conscience of the importance of the training and development of human resources in SME's, due that the main problem is a lack of awareness and a lack of information within the population.
- Increasing the chambers of commerce important roll as a diffuser of information.

## **CHALLENGES**

### **Family managed**

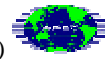
The SME's face different challenges. One of the main ones is that these enterprises are family owned managed, meaning that it is constituted by the confluence of two complexities: the enterprise and the family. Values, attitudes, and social norms of both social institutions, which inhibits or difficult the alliances with other enterprises, the forms of associations, and how professional it's administration can be.

### **Low value added investment**

Another problem of the SME's in Mexico is that the amount of value added of the investment in Mexico is very low. There is a great amount of local industries, light industries with low linkages between enterprises that do not promote innovation and competitiveness within the market; in contrast with supporting industries or large-scale industries, with high linkages with the SME's. There is the need to differentiate the promotion policies between these two industries in order to achieve a greater development of the SME's in Mexico.

### **Associations or integrative enterprises**

Associations have taken place since 1993 through chambers of commerce, credit unions, cooperatives of producers, and integrative enterprises; through the association



of SME's with the idea of increasing productivity, efficiency and competitively, obtaining common specialised services, and the common realisation of activities such as purchasing, commercialisation, technological improvements, financing, training and design activities.

This new model was proposed by the government to the SME's in order to take a common front to globalisation. It was evident that in an open market, SME's needed to implement quality and quantity changes for their survival, and they needed to get together according to diverse modalities in order to benefit from the positive changes. Associations are important for the strengthening and permanency of SME's, because they increase their negotiation bargaining power by representing their common interests, and obtaining certain services which otherwise are out of their reach.

The main objectives of the network can be either economical or social. Economically, the entrepreneurial networks are a way to reduce transaction costs in the market, through the acquisition of cheaper products. Socially, the benefits come from personal contacts as an instrument to obtain what they want.

In order to construct these integrative enterprises, the government establishes certain requirements in order to give mainly three types of support: fiscal, having a preferential tax regime; financial, through better access to loans; and administrative, through diverse mechanisms to strengthen the managerial activities of the entrepreneurs, through training and technical assistance.

The association of integrative enterprises can only be adequate to elevate the competitiveness of the SME's, as long as it exists a long-term development economic policy that contemplates among other things, the development of the human resources.

In other aspects, even though the SME's in México are represented by different organizations, their size and heterogeneity generate high asymmetries and unbalances, in which the most powerful groups have a higher control. The lack of well represented associations in Mexico, inhibit the SME's possibility to be represented and express and demand the needs of the sector.

### **Subcontracts**

During the last decades, subcontracting has started to take place in Mexico, and the government has established certain programs to support it. This has been useful in developing the integration of productive networks between enterprises of different scale. These brings as a consequence advantages to the enterprises by helping them develop their productive install capacity, allowing them to develop competitive advantages by specialising and promoting work division, giving them the possibility to have new investments and increase their human resource efficiency.

Although we have realise the importance of subcontracting, there are still difficulties that these enterprises face in order to incorporate to the subcontracting system: the lack of market knowledge, the low product quality, the lack of financing, low technical capacity, lack of managerial capabilities, and lack of formality in their delivering timing.



## **Innovation and Link Institutions**

The need to introduce changes in the production and the entrepreneurial conduct in the SME's will bring as a consequence a group of institutional and regional changes, resulting in the need of new processes and institutions in order to respond to the new needs of growth and industrial modernisation.

The concept of innovation do not only represent a group of isolated activities which are oriented to develop new products and process, but it involves a joint group of incremental improvements in the different areas involved (organization, commercialisation, production and quality), where the link institutions can play an important role.

Those institutions interested in selling their services and working as intermediaries to give specialised technological, consultancy, and training services, amongst others, to other enterprises are called link institutions. The action of the link institutions contribute to complement the support programs offered by the promotion institutions, in order to increase the confidence and co-ordination of the activities within the enterprises.

These institutions work as a fundamental instrument for the mobilisation of information, science and technology, and all those players that can develop an intermediary structure of support and control in the innovation process. These exchanges give the enterprises new expertise of the products, of the market strategies, of the organizational know-how and of the tacit knowledge, giving as a result the possibility to expand the learning horizons of the enterprises, and reducing uncertainty and transaction costs. At the same time these institutions make up the innovative capabilities of enterprises.

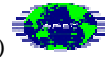
That is the reason why innovation is having greater importance to the policy makers. Innovation is understood in a wide sense, meaning technological or organizational incorporation, the conformation of exchange links, or human resource capabilities.

In the process of innovation complementary factors, as the qualifications of human resources and the organization or insertion of technology in social contexts and productive process, are of great importance. In this sense, technology cannot be separated from the environment where it starts, neither from organizational structures. From there the need to identify new competencies in SME's, as the capabilities that are converted in the key factor in the search of competitiveness.

During these last years in Mexico these institutions have acquired much more importance, although we still have a long way to go. The important issue here is not only the existence of these enterprises, but also the creation of technological co-operation networks that allow the existence of a national system of innovation.

The limitations that the SME's have related with the insufficiency of knowledge, organizational capabilities, and the training and administration of human resources; restrict the capability of innovation and the efficiency of these networks. There are as well other problems, which make difficult the consolidation of more complex relations. The limits of effective information and diffusion of resources, and the lack of





transparency, make difficult the consolidation of more complex relations. To this we can add the lack of communication between the research institutes, the technical formation and the industrial activities, which develop their strategies with little interest in knowing the specific problems of the regions and the productive sectors. This lack of interinstitutional co-operation brings as a consequence isolation, lack of information, and the multiplication of inefficient programs with weak repercussions.

## CONCLUSIONS

In order to achieve the development of SME's and their human resources we need the joint action of different groups: enterprises with innovative capabilities, government efforts to develop the micro and macro general conditions, and the right institutional environment which allows the flow of information between the different social actors, and as a consequence contributes to the continuous social learning. This has to be strengthened by the development of productive promotion institutions, private and public, intermediary organisms, specialised service enterprises, and scientific and technological institutions.

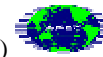
It has been proved that the successful experiences of industrialisation of the SME's depends directly from the competitive strategies developed, in the way they behave and are linked with other enterprises, upon the existence of an institutional frame of support that allows them to have access to the necessary resources for the constant innovation of products and processes, as well as the training of their human resources, and to the existence of adequate an specific economic and political policies for their support. This is the road that Mexico needs to follow.





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ENTERPRISE'S SIZE			
Scholarship Level	Enterprise's Size		
	Micro	Small	Medium
None	3.7	0.2	0.2
Unfinished Elementary School	15.5	1.0	0.5
Finished Elementary School	<b>19.1</b>	3.9	1.2
Unfinished Secondary	12.6	5.5	1.8
Finished Secondary	2.3	1.6	1.0
Unfinished Technical Studies	5.9	6.5	4.1
Unfinished High School	3.0	1.2	2.0
Finished High School	6.6	7.8	5.4
Unfinished College	5.1	8.5	7.9
Finished College	18.3	<b>55.4</b>	<b>63.4</b>
Professional	2.3	6.9	11.6

Difficulties	Enterprise's Size		
	Micro	Small	Medium
High cost of purchasing or repairing	<b>82.5</b>	<b>75.5</b>	<b>69.9</b>
Lack of personnel's capacitating	3.4	6.8	7.9
Insufficiency of national supply	2.6	2.3	2.3
Disregard for how to do it	3.4	1.2	2.0
Insecurity	2.6	2.5	1.5
Financial problems	1.0	2.8	2.0
Others	4.5	8.9	14.4

INVESTMENT ITEMS			
Investment Items	Enterprise's Size		
	Micro	Small	Medium
Machinery	15.3	41.8	<b>47.3</b>
Raw Material	<b>62.3</b>	<b>49.7</b>	40.8
Installations	14.2	38.7	40.8
Salary	13.9	29.4	27.5
Out of business	35.3	6.4	4.9
Do not make profits	1.8	3.6	4.3
Others	1.8	1.7	3.8

LABOUR DISPUTES			
Problems	Enterprise's Size		
	Micro	Small	Medium
Absenteeism	<b>44.5</b>	<b>42.9</b>	41.8
High rotation	22.4	38.3	<b>47.5</b>
Capacitating	24.2	30.8	26.0
Salaries Increase	19.3	23.0	32.8
Selection	18.5	19.9	16.9
Labour Disputes	10.6	16.1	17.5

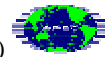


Benefits Increase	3.9	10.7	9.0
Others	2.8	2.9	2.2
CAPACITATING AREAS			
Areas	Enterprise's Size		
	Micro	Small	Medium
Marketing	<b>27.0</b>	<b>31.5</b>	<b>31.9</b>
Administration	18.9	21.0	15.3
Production	10.1	13.8	18.6
Finance	7.8	14.3	12.0
Human Resources	3.7	8.3	10.2
Legislation	2.4	3.0	4.9
All of them	0.7	2.4	2.6
Don't Know	25.6	3.5	1.8
Others	3.8	2.2	2.7

Areas	Enterprise's Size		
	Micro	Small	Medium
Production, quality control	17.9	<b>34.3</b>	<b>47.8</b>
Marketing	6.8	8.4	6.9
Human Resources	3.2	5.9	5.9
Administration	5.2	7.1	3.8
Sales	3.9	5.1	3.6
Finance	1.6	2.9	3.1
Do not require	6.1	4.7	3.9
Don't know	<b>41.2</b>	17.9	13.9

USE OF THE CREDIT			
Use of the credit	Enterprise's Size		
	Micro	Small	Medium
Raw Material Purchasing	<b>69.3</b>	<b>65.5</b>	<b>63.5</b>
Acquisition of machinery and equipment	19.5	30	36.6
Settlement	2.4	6.2	5.9
Demodulation	1.4	3.1	3.1
Site purchasing	3.6	2.2	3.4

Factors that influence the growth and Maintenance on the market	Enterprise's Size		
	Micro	Small	Medium
Personnel Capacitating	17.2	47.3	49.4
Activities Specialisation	<b>38.8</b>	<b>38.8</b>	33.7
Material Resources Optimisation	18.4	38	<b>50.4</b>
Don't know how to do it	21	2.7	0.8
Getting grouped in order to be more productive	17.9	19	17.5
Offering a better price	2.3	1.9	2.1
Other	4	3.3	2.1



Enterprise's Size	Number of employees	Annual Sales	
		SECOFI's approach	NAFIN's approach
Micro	1 trough 15	\$ 900,000.00	\$ 2,100,000.00
Small	16 trough 100	\$ 9,000,000.00	\$ 21,000,000.00
Medium	101 trough 250	\$ 20,000,000.00	\$ 50,000,000.00
Big	More than 250	Minimum \$20,000,000	Minimum \$50,000,000

Management Universe in Mexico			
Enterprise	% Economic Units	Occupied Personnel	% GDP
MICRO	97	47	31
SMALL	2.7	20	26
MEDIUM	0.2	11	12
BIG	0.1	22	31

Size	Average of the	Size	Who is managing
	Manager's age		
Micro	41	64%	87% the manager
Small	39	11%	63% the manager

