

Skills anticipation and matching in the sectors of car industry and logistics in the region of Tanger (Morocco)

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Objectives of regional project

- Regionalisation
 - Regional partnership training-employment (**GTR**)
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- Improved effectiveness training matching needs regional economy
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- Sustainable / replicable approach to planning at regional level
 - Focus on 2 important sectors: car industry and logistics
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A regional and sectoral approach to skills anticipation and matching – 3 key components

1. Analysis of training supply

Initial E&T (HE,
secondary, VET)

Continuing training

Analysis of content
of qualifications

2. Analysis of demand for skills

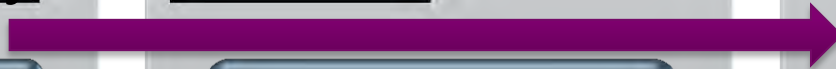
Sector: car industry

Sector: logistics

3. Analysis of mismatch

Car industry

Logistics



A regional and sectoral approach to skills anticipation and matching: main steps

2013

- Regional working group (GTR): regional stakeholders + national level; scope of analysis (sectors): support development common interest
- Analysis of training supply: scope; methodology; sources; data gathering and analysis

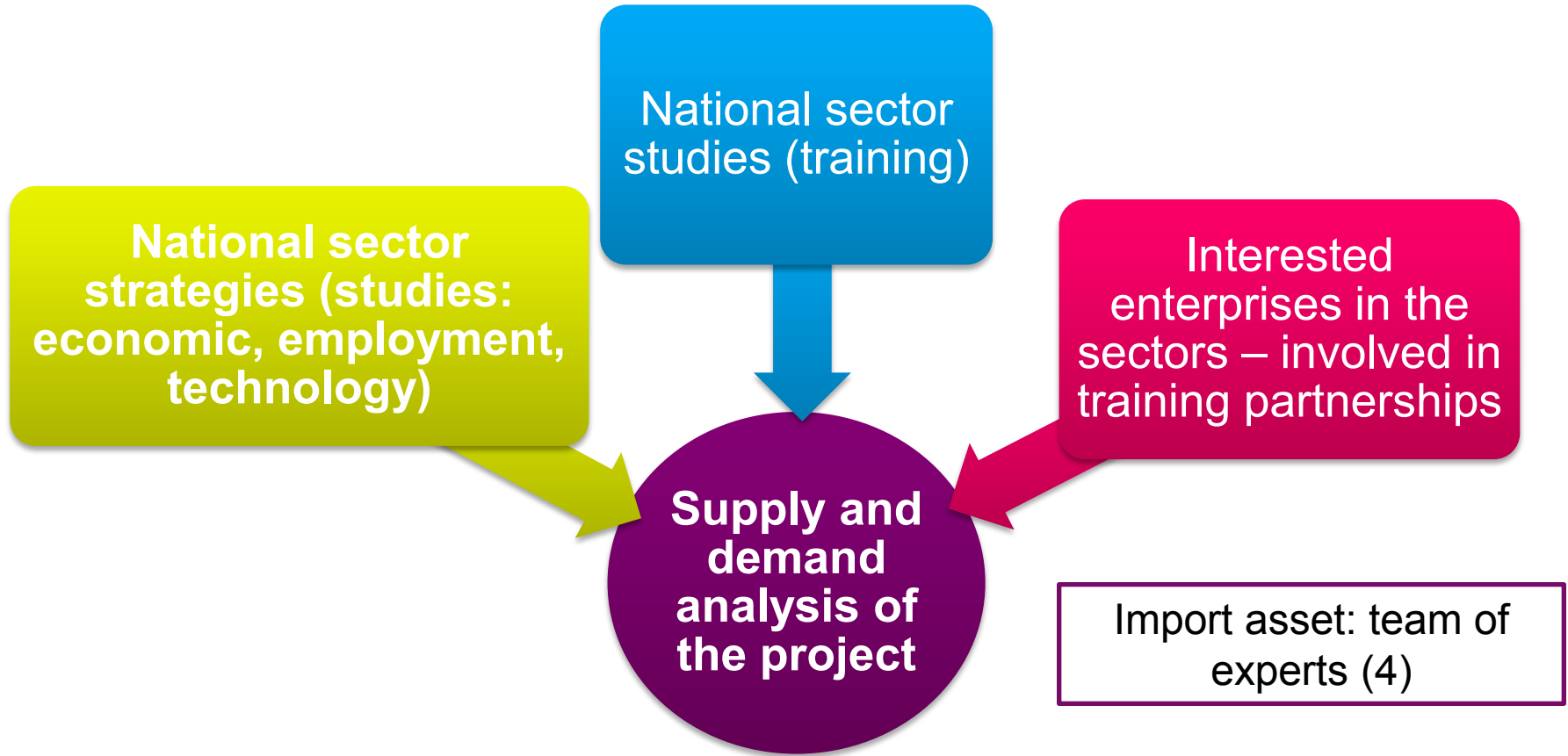
2014

- Methodological package for demand analysis and analysis of mismatch
- Data collection: interviews selected enterprises 2 sectors
- **Statistical portrait region (complementary analysis)**
- Analysis of mismatch
- 3 technical workshops with GTR / experts

2015

- Discussion of results from mismatch analysis
- Synthesis package for dissemination
- In-depth discussion of results mismatch analysis – measures for action
- Dissemination
- **Further support by EU – regional Observatory Employment-Training**

Existing analytical base and national strategies made the project easier to implement



A regional and sectoral approach to skills anticipation and matching - OUTPUTS

- ❑ METHODOLOGY PACKAGE (supply, demand, relation training-employment)
- ❑ REPORT OF TRAINING SUPPLY ANALYSIS
- ❑ REPORTS OF DEMAND FOR LABOUR AND SKILLS – 2 SECTORS
- ❑ REPORT OF MISMATCH ANALYSIS (RELATION TRAINING – EMPLOYMENT)
- ❑ SYNTHESIS PACK FOR DISSEMINATION
- ❑ REPORT OF STAKEHOLDERS' RECOMMENDATION – MEASURES AND SOLUTIONS

- Asymmetric information :

- ✓ Training supply analysis is based on an exhaustive information, mainly collected in administrative data sets
- ✓ Skills demand analyses are based on a sample of firms, whose statistic representativeness may have fragilities (moreover, total number of jobs is unknown, because of very rapid progress in the two analysed sectors)

- Need for a suitable method in a regional approach

- Marocco has a tested methodology for national sectors studies, based on quantitative projections of employment. But we consider that its application at regional level was too heavy for the means and objectives of the project.

- Approach based on « **working functions** » : articulation of results highlighted in training supply and skills demand analysis reports
 - Note : working functions have been defined in the national sector study (2010). They regroup trades, taking into account following factors : similarity of skills required, level and scale of the required training, degree of expected versatility*
- 21 working functions (on 31) find themselves in our regional survey. These 21 working functions are regrouped in 9 spheres :
 - The 4 first ones cross various sectors of economy (mainly industrial activities) : management, industrialization and méthodes, maintenance, quality. They are presents in all sub-sectors of auto industry.
 - Next 5 functions are spécifique : wiring, caps (textile), metal mechanical, plastics, trucks (assemblers).
- Quantitative results are weighted with qualitative information (through interviews) : 3/5 years recruitment trend anticipated for each occupation, training level required, skills development needs of employees...

- The sample contains 9 enterprises (region). They represent >10 900 employees (1/3 of total) and 40 occupations, but some sub-sectors / trades are probably under-represented (plastics, for example)
- For most of sub-sectors, 70% to 90% of employees come from others regions : caution on the regional approach for recruitments and training needs analysis
- Some training courses are transversal (management, engineering, maintenance...) : caution on training needs assessments

Example for a transversal field : « management »

- 2 working functions : a) production control agent (trade : team leader) and b) production manager (Production manager and Engineering manager)

Main employment-training indicators for management's working function

Working function	Occupation	Employments						Training				
		Number - ETF regional survey	Number %	% <i>national</i> <i>survey</i> <i>(2010)</i>	Access level	Needs trend 3/5 years	% <i>Projected</i> <i>needs 2014-</i> <i>2017 (1)</i>	Number - 1st year 2012/13	Number - 1st year 2013/14	% <i>nb</i> <i>2013/2014</i>	Graduate	% <i>Graduate</i>
Production control agent (a)	Team leader	604	5,5%	1,5%	ST	++	2,0%	0	0	0%	0	0%
Production manager (b)	Production manager - Engineering Manager	44	0,4%	0,6%	PTM	++	0,8%	30	25	0,3%	0	0%

ST : specialist technician / PTM : production top management – engineer

(1) : projections made by Moroccan experts in the demand analysis report (derived from national projections)

Production agent control / Team leader

- They are overrepresented, particularly because Renault and electrical cable firms had developed this function. Their number is expected to increase rapidly
- We learned that these jobs are filled by operators (internal promotion). They could be filled by young graduates people...but no training currently correspond with this grade.
- This occupation corresponds to a specialist technician position. They required technical and managerial skills : this is a key issue for employers (former operators are poorly prepared to get management skills)

Production manager

- Higher level (Production manager - Engineering Manager) : their number is understandably lower, but needs increase.
- One training course may be linked to this job (*Ingénierie et gestion de l'environnement industriel (IGEL)*) but this new course has no graduate students yet.
- Several diplomas (qualifications) for general engineering profile – provided by the Ministry of Higher Education (Tétouan University) : they probably meet the needs (however the nomenclature connects them to the working function « industrialization and methods »).
- These trainings courses are all in technical dominant, without visible acquisition of softs skills (for management) : common issue to team leaders

Qualitative dimensions:

1. Development of continuing training for managers (team leaders and managers) :

- *Soft skills* : team management, communication techniques, time management, stress management, conflict management/negotiation techniques...
- Understanding the legal framework (labour law)
- Production techniques specific (for automotive technologies) : just in time, lean management...

2. Development of managers' (team leader) initial training qualification

Quantitative dimension:

1. Training of production managers' initial training (engineers), according to the needs of whole industry.

Matching: needs in auto industry - synthesis by qualification levels (1/2)

	Developments in initial education	Developments in continuing training
Highly qualified levels	<p>Production managers Quality manager Robotic engineers Composite materials engineers</p>	<p>Management Soft skills</p> <p>Project management, customer relation, project quality</p>
Intermediate managers	<p>Development of manager's (team leader) initial training qualification</p>	<p>Reinforcement and developing of hard skills :</p> <ul style="list-style-type: none"> ✓engineering, robotics, programming and 3D measure ✓specific techniques and quality in the auto industry : just in time, lean management...

Matching: needs in auto industry - synthesis by qualification levels (2/2)

	Developments in initial education	Developments in further professional training
Technicians / specialized technicians	<p>Tool-makers and moulistes</p> <p>Technician of production plastic injection Formation processing composite materials</p> <p>Sheet metal work (body work, press work)</p> <p>Quality control agents</p>	<p>Specific trades technical skills (Manufacturing, weld, sewing, injection)</p> <p>Soft skills : teamwork</p> <p>Transversals skills : quality, procedures in production, maintenance</p>
Opérateurs	<p>Automated production lines operators</p> <p>Plastic injection operators</p> <p>Formation processing composite materials operators</p> <p>Industriel cabling operators</p>	<p>Specific trades technical skills (Manufacturing, weld, sewing, injection)</p> <p>Transversal skills : 1st level maintenance, quality processes respect, logistic processes respect, teamwork</p> <p>Fundamental knowledges (literacy, numeracy and problem-solving skills)</p>

- There is no national definition of trades or work functions to facilitate mismatch analyses. In the skills demand analysis trades are classified in 3 classes : managers and engineers, specialized technicians, operators and first level technicians.
- Matching employment and training is not as direct as in the auto industry analysis : trainings courses cannot always be connected to a specific trade

Methodological limits

- Methodological limits are the same than in auto sector. But the representativeness of the sample is more critic.
 - Indeed, logistics activities engaged various skills, based on transport mode (road, rail, maritime and air transport), materials/goods (building materials, farm produces
 - Finished industrial products or semi finish ...) and position of the entreprise in value chain (Charger, provider, e-commerce operator ...).
 - Logistics jobs are in specific providers, and also in almost all sectors of activity.
- => Our analysis cannot cover the variety of employment situations, and therefore all training needs.

Identified training needs in logistic : synthesis by qualification levels (1/2)

	Developments in initial education	Developments in further professional training
Highly qualified levels	<p>Engineers training development :</p> <ul style="list-style-type: none"> -Non-specialized logistic engineers -Information systems engineers -Port logistic engineers 	<p>Management skills : team management, communication techniques, stress management, etc.</p>
Intermediate technicians	<p>Non-specialized technicians :</p> <ul style="list-style-type: none"> - transport of goods - logistic operations <p>To complete with specific training modules or specific degrees (qualifications):</p> <ul style="list-style-type: none"> •Declaration customs •Supply technician approvisionnement •Cold chain logistic technician •E-logistic technician •Port logistics technician 	

Identified training needs in logistic : synthetisis by qualification levels (2/2)

	Developments in initial education	Developments in further professional training
Opérateurs / First level technicians	<p>Forklift truck operators, orders assistants, storage operators / shipper receiver operators : first level training developments, including soft and hard skills</p> <p>Course training for drivers (not only a driving license !)</p> <p>Course training for port handling operators</p>	<p>Soft skills (team work) : relationship skills, communication, stress management</p> <p>Hard skills :</p> <ul style="list-style-type: none"> -Computer skills / information processing -Use of new handling means / tools

Some general reflections on the observation tools and the method

- Even small sample size allows us to identify strategic issues and draw conclusions (ex.: occupations not covered by training system). Qualitative information is very useful.
- However, forecasts should be more accurate with comprehensive and supported by recent data, given the quick development of the two sectors
- Continuing training data sets are inadequate / piecemeal (for job searchers or employees)
- Logistic : occupations have to be normalized, to allow mismatch analysis