

2th IAP meeting day, the 29 May 2013

Does the organization mission matter for job quality of low-skilled workers in a quasi-market?

Constructing a composite indicator of job quality



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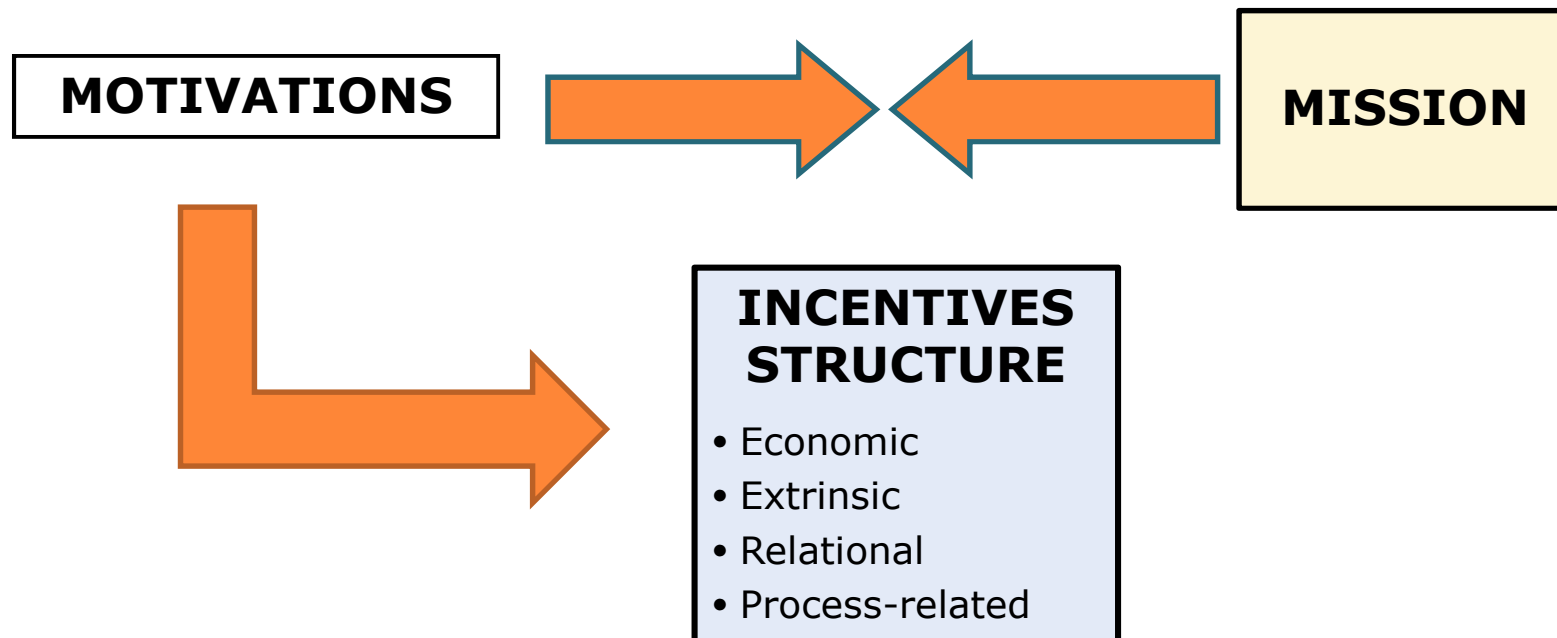


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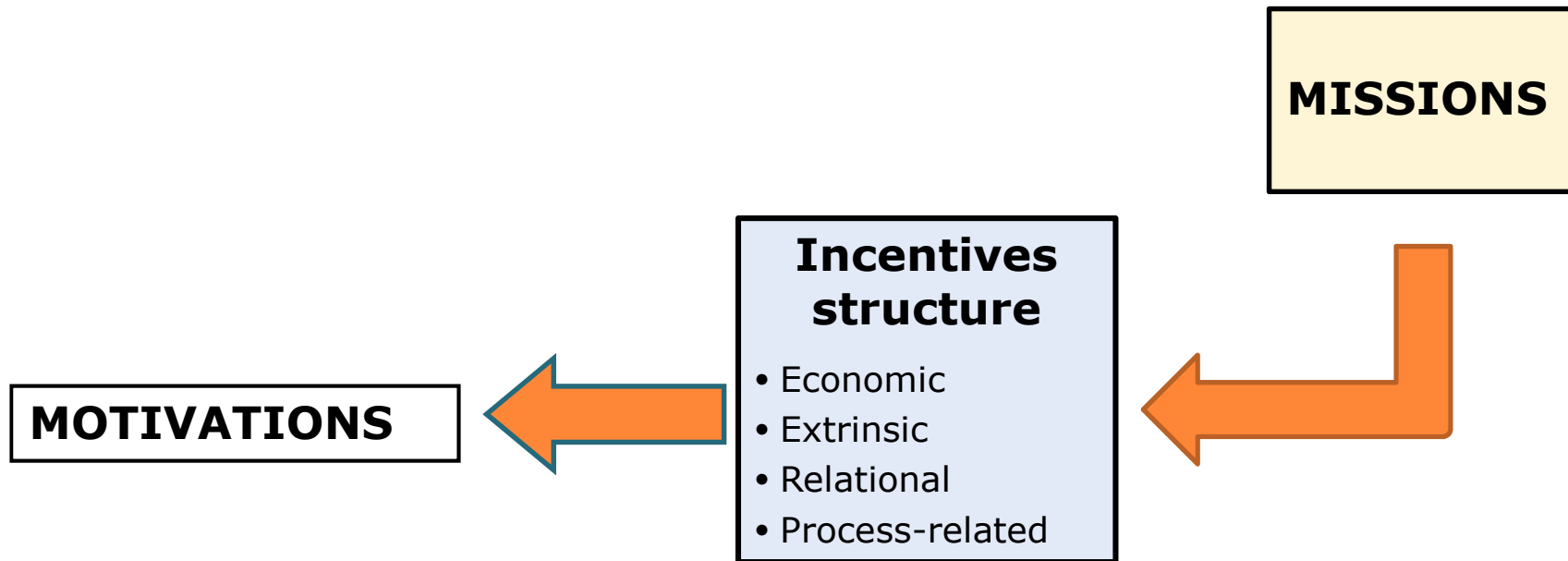
1) LITERATURE REVIEW

(self)-selection model:



1) LITERATURE REVIEW (2)

Exposition model:



2) ASSUMPTIONS

H1: Job quality of low-skilled workers differs between SE and FPO

Job quality dimensions (Munoz, 2009)

Employment quality	Work quality
Wages	Physical working conditions
Career opportunities	Level of autonomy
Employment security	Intensity of work
Working hours and flexibility	
Opportunities of skills development	
Participatory and relational aspects	

2) ASSUMPTIONS

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3) EMPIRICAL DESIGN

THE QUASI-MARKET OF SERVICE VOUCHERS IN BELGIUM

Table 1: The different types of providers

Sector	FPO	SE	
Mission	Profit maximization	Workers' integration	Home care
Type of provider	FPO	WISE	HCSO
Sample of workers	132	366	129

3) Empirical design

Aims:

- Analyze with accuracy all the job quality dimensions and compare NPO with FPO.
- **Creation of a composite indicator of job quality**

4) CONSTRUCTING A COMPOSITE INDICATOR OF JQ

- Each dimensions is measured thanks to a combination of quantitative and/or qualitative (mostly dummy) indicators
 - Each dimension is composed by a minimum of 2 indicators and a maximum of 5 indicators
 - Example: the wage dimension
 - Quantitative variable (continue)
 - Gross hourly wage
 - Qualitative variables (Yes/No)
 - Presence of prime or other type of remuneration
 - Presence of fringe benefit
 - Total reimbursement of travel costs
 - Travel time = Working time
- Need to use Factorial analysis: Multiple correspondence analysis (MCA)

4) CONSTRUCTING A COMPOSITE INDICATOR OF JQ (2)

Multiple correspondance analysis (MCA):

- MCA is part of a family of descriptive methods (such as clustering & factor analysis, Principal Components Analysis) which reveal patterning in complex data sets
- Is able to map both variables and individuals, so allowing the construction of complex visual maps whose structuring can be interpreted.
- Has unusual capacity to link quantitative and qualitative data in meaningful ways because of its interest in the individual

4) CONSTRUCTING A COMPOSITE INDICATOR OF JQ (3)

Multiple correspondance analysis (MCA):

- AIM: Identify the relations between the indicators in order to create dimensions
- MCA = CA on an indicator matrix (i.e., a matrix whose entries are 0 or 1)

	Sexe	Satisfaction	Taille
Individu 1	H	Très Satisfait	Grand
Individu 2	F	Moyennement Satisfait	Grand
Individu 3	H	Pas Satisfait	Petit
...
Individu n	F	Très Satisfait	Moyen

Tableau Disjonctif
Complet

	Sexe		Satisfaction			Taille		
	H	F	Très Satisfait	Moyennement Satisfait	Pas Satisfait	Grand	Moyen	Petit
Individu 1	1	0	1	0	0	1	0	0
Individu 2	0	1	0	1	0	1	0	1
Individu 3	1	0	0	0	1	0	0	0
...
Individu n	0	1	1	0	0	0	1	0

4) CONSTRUCTING A COMPOSITE INDICATOR OF JQ (4)

Methodology:

- Coding the quantitative variables
- Preliminary analysis: MCA on all the variables
- Factors extraction by MCA for each dimension
- Each indicator is standardized by the min-max method
$$(\text{value}_{ia} - \text{min}_i) / (\text{max}_i - \text{min}_i)$$
- In each factor, all indicators are weighted by their factorial score. The indicators are added together in order to attribute a value to the factor.
- Each factor is weighted according to their contribution to the proportions of explained inertia (i.e. variance) of the dimension. The weighted factors are added together in order to create the dimensions
- Adding the 9 dimensions together and divided by 9 to obtain the composite indicator of job quality

4) CONSTRUCTING A COMPOSITE INDICATOR OF JQ (5)

- How to code the quantitative variables in ordered variables?
 - Between 3 and 8 categories
 - Have no categories with too little observations
 - ...
- All the indicators should be positively correlated with Job Quality → Invert the one which are not
Ex: Scale of employment insecurity is inverted before the MCA
 - But, what to do with indicators as the difference between the # of working hours and the # of working hours wanted by workers?

4) CONSTRUCTING A COMPOSITE INDICATOR OF JQ (6)

- Do we have to use the gross hourly wage or the gross monthly wage as indicator?
 - Hourly wage is more accurate to compare wages in SE and FPO
 - Monthly wage is more accurate to create a composite indicator of JQ.
- Housekeeper and ironer in the sample

Some indicators are only for Housekeeper or ironer
→ Do we have to skip this indicators or there exist one solution to incorporate them in the global indicator of job quality?

5) FIRST INDICATIONS/RESULTS

<u>Job quality:</u>	WISE	HCSO	FPO
Wages	++	++	
Employment security	++	+	
Working hours	+	++	
Time schedule and flexibility		+	+
Opportunities of skills development	++	+	
Participation	+	+	
Relations with supervisors			+
Relations with colleagues	++	+	
Level of autonomy		++	+
Physical working conditions	+	+	
Career opportunities		+	

Thank You