



# Relevance of Standard Labour Statistics Method in Adverse Conditions

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# More of Less Personal Experience

1. Women in LM
2. Measurement of Informal Sector
3. Relevance of Standard ILO definitions in adverse conditions
4. Relevance of Internationals Comparisons based on ILO Standards
5. Model based Analysis Approach
6. Multidimensional approach for measuring labour market membership



# Labour Market Analysis

## Transitional behavior

Observes the overlapped sample individuals LF status to estimate the likelihood of the next step and calculate the likelihood of a certain person to be in specific LM status after

## Multidimensional Approach

Argues the ILO headcount approach of marking people in/out LM by utilizing more information to calculate a membership function (Simulation of MPI poverty index – Recently adopted for HDR)

## Latent Class Analysis

Classify certain group into subgroups based on unobserved latent variable

Quarterly Transitional Matrix of LF Status – Women  
1996-2008

Total	Not Attached	Marginally Not Attached	Marginally Attached	Unemployment	Vulnerable employment	Regular employment	$\frac{Q_{t+1}}{Q_t}$
100	<u>15.3</u>	0.2	1.0	2.7	2.3	<b>78.5</b>	Regular employment
100	<u>54.8</u>	0.6	0.0	0.0	<b>42.4</b>	2.3	Vulnerable employment
100	<u>41.4</u>	0.0	6.3	<b>31.5</b>	3.6	17.1	Unemployment
100	<u>34.4</u>	3.1	<b>21.9</b>	25.0	0.0	15.6	Marginally Attached
100	<u>36.4</u>	<b>53.5</b>	1.0	3.0	2.0	4.0	Marginally Not Attached
100	<b>94.0</b>	0.4	0.2	0.8	<u>2.9</u>	1.7	Not Attached
<b>100</b>	<b>86.1</b>	<b>1.0</b>	<b>0.4</b>	<b>1.4</b>	<b>4.5</b>	<b>6.5</b>	Total

# Latent Class Analysis

## Inactive women are not homogeneous

Latent class analysis is the assumption of conditional independence. Within each latent class, each variable is statistically independent of every other variable; latent classes are defined such that, if one removes the effect of latent class membership on the data, all that remains is randomness understood as complete independence.

LCA supposes a simple parametric model and uses observed data to estimate parameter values for a model. The model parameters are the prevalence of latent classes and conditional response probabilities.

$$\pi(y_k / x) = \frac{\exp(\eta_{y_k / x})}{\sum_{y_k} \exp(\eta_{y_k / x})}$$

Estimation is usually done with iterative numerical methods, usually using the maximum likelihood.

# Inactive women are not homogeneous

<b>Group 1 (21%)</b>	<b>Group 2 (62%)</b>
<p>Young Enrolled Not married Full time on education In large HH Lack work experience</p>	<p>Young Married without children Home makers Middle-low education Large HH Lack work experience</p>
<p><b>Group 3 (14%)</b> Old Not enrolled Ever married with children Home makers Low education level Medium size HH</p>	<p><b>Group 4 (21%)</b> Not enrolled Middle-aged ages Ever married with children Out of labour – old Low level of education Medium-Large HH</p> 

# Multidimensional Approach

$$f(x_i) = \frac{\sum_{j=1}^k g(x_{ij})w_j}{\sum_{j=1}^k w_j}, i = 1, 2, \dots, n$$

$$g(x_{ij}) = \begin{cases} H(x_{ij}), \\ 1 - H(x_{ij}), \end{cases}$$

$$w_j = \ln\left(\frac{1}{P_j}\right)$$

X1: work during the reference week

X3: employment status

X5: job search

X7: employment duration

X2: number of weekly work hours

X4: wanting job

X6: intensity of job search

X8: unemployment duration

## Fuzzy set global membership index to labour market by subpopulation

	Male			Female		
	PAL	UK	POL	PAL	UK	POL
<b>Binary</b>						
Employed	0.90	0.98	0.95	0.81	0.97	0.94
Unemployed	0.42	0.46	0.41	0.41	0.49	0.40
Inactive	<b>0.01</b>	<b>0.01</b>	<b>0.03</b>	0.00	0.00	0.03
<b>Total</b>	<b>0.54</b>	<b>0.80</b>	<b>0.60</b>	<b>0.11</b>	<b>0.69</b>	<b>0.50</b>
<b>Categorical</b>						
<b>Employed</b>	<b>0.82</b>	<b>0.97</b>	<b>0.95</b>	<b>0.76</b>	<b>0.93</b>	<b>0.93</b>
<b>Unemployed</b>	<b>0.46</b>	<b>0.52</b>	<b>0.32</b>	<b>0.45</b>	<b>0.54</b>	<b>0.32</b>
<b>Inactive</b>	<b>0.16</b>	<b>0.01</b>	<b>0.02</b>	<b>0.15</b>	<b>0.01</b>	<b>0.03</b>
<b>Total</b>	<b>0.55</b>	<b>0.79</b>	<b>0.58</b>	<b>0.23</b>	<b>0.67</b>	<b>0.48</b>

# Concussion of Past experience

- 1- ILO definition is not appropriate to give a comprehensive picture on labour reserve particularly in the less organized markets.
- 2- Alternative techniques for analyzing labour force behaviour at both national and international levels. While we did not introduce an alternative of the ILO definition, it was indicated that a more sophisticated model-based approach could be employed
- 3- There is loss of important information in the standard ILO classification. It is too aggregated to serve the first function of LMIS

- 4- Organizational set up seems to have its impact on the basic concepts of labour market symptoms used in classifying persons against ILO labour force framework
- 5- ILO standard classification provides an acceptable tool to monitor final indicators of labour market trends at the national level, international comparisons should not be based on the final indicators, but on a function or indices of intermediate indicators reflecting personal, family and community dimensions and accommodating the impact of institutional setup.
- 6- National statistical offices which conduct regular labour force surveys, need to revisit sampling rotation techniques to respond to the need of longitudinal analysis.

# Adverse Conditions and Relevance to ESCWA

**Adverse conditions** are usually present, among other reasons, in conflict and post conflict situations which are defined primarily as processes of transition towards consolidated statehood. This includes three main situations where a state might pass through as follows:

- **A crisis state** is a state under acute stress, where reigning institutions face serious contestation and are potentially **unable to manage conflict and shocks**.  
(e.g Yemen, Iraq, Palestine)
- **A fragile state** is a state that is failing, or at risk of failing, with respect to **authority, legitimacy and comprehensive service entitlements of citizenry**.  
(e.g Yemen, Syria,
- **A post-conflict state** is a state that has emerged out of conflict, crisis or fragility and is **progressively establishing institutions and making resources** available to sustain itself. (e.g Sudan, Palestine)

Half of Countries in ESCWA region pass through fragility  
Business is **NOT** as usual

# Relevance of traditional tools

sampling frames might not be adequate or might not exist and new statistical needs require new sampling frames to be constructed; mobile check points, **Palestine**, T-wall system-**Iraq**, revolution setting – **Yemen**

Blockade and catchment zone (**sampling, recruitment**)

The concept of **formality** during curfew, **Seeking Job** during closure, become irrelevant. **Tunnel** economy, **taxation** in Gaza, **traders** in change square in Sanaa. – **revolution economy** – how to measure?

**Smuggling** in Iraq is made by formal bodies, in Gaza by the Government, **injecting** money to political parties in Lebanon-SNA!!

During adverse conditions basic concepts become irrelevant, and need of out-of box ideas and approaches

# Technical Challenges - **Examples**

1. Definition of ... job condition  
become ...

## **Three-fold challenges**

2. C ...
1. Outstanding situation requires out-of-box ideas and human capacities to initiate
  2. ESCWA region lacks strong and proactive statistical systems
  3. Most of the NSOs apply the international standards without customization or adaptation
- S ...

# On Women involvement in the informal economy

- Measurement of female involvement in the LM is underestimated.
- Measurement of women involvement in the informal economy is challenged by methodological and operational definitions.
- There is lack of knowledge and lack of innovative approaches to measure and analyze women's involvement in informal economy.
- Standard LFS questionnaire is seen as gender blind. In fact a gender lens analysis of PCBS selected questionnaires showed very interesting outcomes.

# Conclusions

- Adverse conditions might represent a dominant factor that could affect the applicability of well known methods for measuring informal sector
- ESCWA region enjoys a wide spectrum of situations which makes an out-of-box approaches for measuring informal sector a challenging tasks
- ESCWA region lacks regular estimation of the size and structure of the labour force statistics
- ESCWA region lacks regular estimation of the size and structure of the informal sector and its role within the economic policies in the region.

## Conclusions/cont

- Survey statisticians have to consider the applicability of measurement method and make sure that technical compromises do not affect the relevance of measurement method
- For the sake of measurement at the first time, the parallel mixed survey method seems to be less likely to be affected by adverse conditions in terms of the technical infrastructure needed for implementation.
- Once this has been made, the 1-2 approach could be utilized as machinery for monitoring and tracking changes as this method is less costly, timelier and could utilize ongoing statistical activities in both data collection and analysis stages

# Framework for Intervention by ESCWA and Other intervening bodies

## Knowledge

- Training to create technical knowledge and skills
- Exchange of expertise within the region
- Transfer of knowledge from other regions

## Tools

- Develop an operational manual
- Develop methodological manual (with LFS, stand alone, etc, sampling frames, weights, )

## Data

- Encourage the regular collection and dissemination of LFS
- Encourage collection of data on informal sector through UNESCWA SC
- Disseminate regional statistics and establish dbase on the contribution of ifo-sec (job creation and/or GDP)

## Research

- Assess applicability of standard traditional methods to the region
- Develop out of box methods to measure informal sector in adverse conditions