Analysis of Determinants of Security at Work in Ivory COast

Antoine N'Gratier
PhD student
Department of Economics
Félix Houphouet Boigny University of Abidjan
Email : napositif2005 [AT] yahoo.fr

_____

ABSTRACT---- *This article is a contribution to the debate on security at work. It conducts an analysis of the determinants of security in Ivory Coast and leads to recommendations. To conduct this analysis, the author is using a bivariate probit model. It concludes that the education levels, the corporate union's existence, are significant factors explaining security. With these results, the author recommends training employees, companies to integrate into their management process, concepts that take into account the working conditions, knowing that their survival depends on it.*

Keywords ----- Security at work, Marginals Effects, Corporate social responsibility

_____

1. INTRODUCTION

Security concepts and health, decent jobs, invite themselves increasingly in discussions between economic and social partners. Today, if the companies are "forced" to integrate into their strategies and management these vital concepts it's because they see them as opportunities, but also ways to constantly improve their images.

Workplace security is a legal and social obligation. If the implementation of work security mechanisms involves costs for the company, it will be dangerous as this go across the economy, even if short-term profits are not visible. So even if health and security may appear costly for companies, it is a long term investment.

Occupational security concerns both environment and working conditions, as compensation for employees. Indeed, remuneration allows employees not only to provide honorable family, but also to escape poverty.

This article proposes after a literature review, analyze the determinants of security in Ivory Coast. The analysis of the determinants of working place security is done using a bivariate probit model. The dependent variable is a composition of two variables with health insurance and the absence of wage arrears. The results distinguish the major variables that influence security. These results make recommendations to all stakeholders in a company.

2. LITERATURE REVIEW

2.1 Security at work

Workplace security is now considered a key indicator of the quality of jobs. We speak rightly of health and safety at work. Because men are the first corporate wealth, these include increasing the need for them to implement management systems including the well being of their employees. Speaking of security, it is raising the issue of professional accidents and diseases (whether professional or not), pension insurance, salary arrears or not, ...

The market economy in which companies operate, as well as the rapid changes that are occurring, then bring those to continually devise adaptive processes. The implementations of these adaptive processes, as well as their application are not without consequences on the wellbeing of managers and workers. It sometimes follows changes and tensions in relations between employees, between managers and subordinates, in family life. Changes to opening and working hours sometimes encroach on the health of workers and can be the cause of serious incidents. Indeed, serious industrial disasters: Chernobyl in Ukraine, explosion of a DDT plant of Union Carbide in Bhopal, India, reflect the adverse effects of atypical working hours.

Musculoskeletal disorders, poor eating habits, nervousness and mild narcotics consumption are the consequences of these hours and atypical hours.

To face the consequences of changes of well being and to prevent uncontrolled situation, companies undertake to implement workers' security mechanisms. On construction sites (Buildings Public Works), it is required of all players wearing helmets, boots, gloves, etc. Moreover, with ISO certification process are proofs of the awareness of the economic actors of urgency in the matter.

However, if the security back in general, everything related to the worker's health, we must not forget that safety at work should also concern as we had meant higher pay. Indeed, for all workers, compensation remains an essential component of safety. Compensation enables them to provide for family needs, but also to escape poverty.

We describe in the following paragraphs, the main components of safety included in this thinking, namely: health insurance and the absence of salary arrears.

2.2 Professional security components

2.2.1 Health insurance

With the concepts in vogue as Corporate Social Responsibility (CSR), companies which are made to put in place security mechanisms ensure protection to their employees on the workplace, protection against diseases; we often talk about mechanisms QSE (Quality, Safety and Environment). The health insurance are some of the mechanisms that allow workers to be protect against the risk of occurrence disease states. The establishment of disease-insurance by enterprises, should not be seen by them as a means to "waste their resources." Instead, these ones (insurance-disease) should be seen as safe investments to ensure the sustainability of their structures. Indeed, how to design employees in companies incorporated in disease states and hope for profitability?

In general, with health insurance, the care of a state of the morbidity is partly by the worker. This put an amount representing a co-payment allowing him to receive care. This insurance as appropriate extends their beneficiaries including his descendants.

Health insurance is a real component of security and is a major indicator of a decent job.

2.2.2 Remuneration

A secure job is one that offers the worker a salary that would allow it to achieve, given its level of human capital and the position he occupies. For Jean Gadrey (2001), a decent job is a job that can earn an income (wages or other) fair and worthy given the skills implemented, and in all cases to escape poverty, defined by conventional thresholds requiring debate. It should be noted here that the fairness of wages does not; in any way, that wages are equal among workers, but they can meet their needs. Remuneration can be in several forms: pay monthly, weekly, daily. It also remuneration in the form of premiums or in kind.

However, the issue of compensation is likely to generate huge controversy. Indeed, what can be regarded as acceptable by an employee remuneration based on its reservation. Wage can be regarded as unacceptable by another, assumption is made that these two employees have the same level of education and hold similar positions.

In a study on the determinants of job satisfaction in Europe, Davoine Lucia (2006), concluded that of the 12 European countries that have been the subject of study, job satisfaction was affected in the same by factors including the impact of health, origin, previous experience, age, gender ... but, wages, hours of work, initial training, have ... not the same impact on job satisfaction in all countries. For Davoine Lucie (2006): "It is possible to mobilize the theory of hierarchy of needs that must Maslow and qu'Inglehart resumed in a comparative context ...: once the basic needs (food, housing, security) are satisfied, self-fulfillment becomes more important than salary. Beyond a certain level of salary, the income effect prevails ... and individuals place less importance on salary and more on working conditions or the intrinsic characteristics of the job. " (Weiss, 1976 quoted by Lucie Davoine, 2006).

Moreover, in a context of heightened unemployment and acute crisis, it may appear to work offerers, that the most important is not so much the salary, but the entry into the world of work and job stability. In this situation, what are the job providers that take part of this uncertainty in employment to provide jobs that do not reflect the level of education or work experience of job applicants or to maintain some applicants into categories: the case of interns?

In any event, we note that remuneration is an essential component of security.

3. METHODOLOGY AND INTERPRETATION OF RESULTS

3.1 Methodology

We use estimates in the following data on the employment survey of AGEPE 2012. We perform recording in binary mode of workplace safety components and some explanatory variables such as sex, marital status, education, the employee knows his rights, the existence of the union in the company, the existence of staff representative. Thus, the fact receive any back pay is 1 (respectively 0 if the employee had wage arrears), failure to benefit from health insurance is 1 (respectively 0 if not). The "sex" variable is 1 (respectively 0), when the worker is a man (a woman respectively). The "marital status" variable is 1 (respectively 0) if the employee is married (respectively is not married). The "education" variable is 1 (respectively 0) if the employee to a level of university studies (respectively to a lower level of university studies). The variable "employee knows his rights" is 1 (respectively 0) if the employee knows his rights (respectively does not know her rights). The variable "corporate union of existence" is 1 (respectively 0) if there is a union in a company (respectively when no union in the company). The variable "staff representative of existence" is 1 (respectively 0) when there are staff representatives in enterprises (respectively no company personnel delegates). The sample holder 1456 on individuals.

For the age variable, we eliminated data all individuals not having at least 15 years. Indeed, by the standards of the ILO, is of working age, all individuals with at least 15 years. Furthermore, we eliminated our sample unwritten work contracts. We use the logarithm of the variables Age and seniority in the company, to measure the effect of increasing them.

In the model, it is to test the dependent variables (components of safety) taken simultaneously. The process does not result in fact, a sequential decision but simultaneous occurrence of events.

Note the latent variables and y_i^* and y_j^* representing the fact to benefit from a health insurance company and a lack of wage arrears.

Specifically the two-equation model is:

$$y_i^* = x_i\beta + \varepsilon_i \text{ Où } y_i = 1 \text{ si } y_i^* > 0, 0 \text{ if not}$$

$$y_j^* = x_j\beta + \varepsilon_j \text{ Où } y_j = 1 \text{ si } y_j^* > 0, 0 \text{ if not}$$

With $E(\varepsilon_i) = E(\varepsilon_j) = 0$

The random terms, ε_i and ε_j follow a bivariate distribution with standard variances to 1.

The normal cumulative function of two variables is:

$$prob(X_i < x_i, X_j < x_j) = \int_{-\infty}^{x_j} \int_{+\infty}^{x_i} \emptyset_2(z_i, z_j; \rho) dz_i dz_j$$

The likelihood function to be maximized is:

$$L = \prod \int_{-\infty}^{x_j} \int_{+\infty}^{x_i} \emptyset_2(z_i, z_j; \rho) dz_i dz_j$$

Where $\emptyset_2(z_i, z_j; \rho)$ is the density of the bivariate normal distribution defined by:

$$\emptyset_2(z_i, z_j; \rho) = \frac{1}{\sqrt{2\pi(1-\rho^2)}} e^{\frac{-1}{2(1-\rho^2)}\left(z_i^2 + z_j^2 - 2\rho z_i z_j\right)}$$

ρ denotes the correlation coefficient between the equations. X_i et X_j explanatory variables row vectors that determine the possibilities to benefit from the employment indicators.

Bivariate probit marginal effects on the components of workplace safety.

	INSURANCE AND NO PAY BACK
Sex (man)	**-0.0399****
	(0.0199)
Age	**0.0033****
	(0.0011)
Log (age²)	**-0.0474*****
	(0.0081)
Marital status (married)	0.0198
	(0.0166)
Education (University level)	**0.0390***
	(0.0207)
Length of service	0.0001
	(0.0001)
Log (Length of service ²)	-0.0022
	(0.0054)
Employee knows his rights	0.0174
	(0.0191)
Existence of union in the company	**0.0766*****
	(0.0223)
Existence of staff delegate	0.0053
	(0.0194)

*** ;** ;* Coefficients significant at threshold 1%, 5% et 10%. Standard deviation in brackets.

3.2 Interpretation of results

Marginal table effects of a bivariate probit is evocative. Besides, age and gender, we note that the two variables influencing safety are education (university) and the company union of existence.

3.2.1 Education, main variable for security at word

The marginal effects of a bivariate probit show that the level of education is essential for security. Indeed, the worker with a university-level education saw its chances increase by 3.9 per cent points to benefit from safety.

These results are consistent with many economic work starting with those of Schultz, Becker (The human capital) and Mincer. The same investment in education if it does not produce immediate results, provides high gains in the long term. By deciding to invest in good education, economic agents prefer present income losses caused by the time spent in education, hoping to offset against future profits such as safety.

Considering, compensation as a component of safety, through its Mincer wage equation shows that the salary level with formation equals the salary level without training increased performance (extra pay) associated with the investment in education (not to be confused with a mandatory initial training in most states). In most cases, education is a powerful means by which economic actors influence decisions.

3.2.2 Union impact on labor security

The existence of unions give workers, 7.66 per cent points to benefit from professional security at the 1%. This result proves that unions play a vital role in the well being of workers, as shown by some studies.

In his study on organizing and benefits, Ernest B. Akyeampong, shows that "unionized workers were almost twice as likely as non-unionized workers to be protected ... 84% of unionized workers were protected by a scheme extended health insurance against 45% of non-unionized workers, .. ".

For its part, Fabien Habimana, Director of the Democratic Organisation of African Trade Union Training and Workers (DOAWTU) shows that in Ivory Coast, the establishment of health mutual agreement by the unions with companies bore fruit . He cites the mutual COTIVO, where health care benefits are shared by the employer and the employee; the first paying a monthly sum of 3500FCFA and last the sum of 6000FCFA for medical coverage of the entire family of the worker. Mutual TEXCODI of the mill workers also covers the entire family of the participant with monthly contributions amounting to FCFA 6500 and 2000 CFA respectively for workers and employers.

Thus, the employee trade unions are present on the ground at several levels. They actively participate in discussions on the financing and management of health insurance systems; they mediate between the general objective of increasing

the share of universal health protection and the reality of possible gains in this area as part of business negotiations, and to varying degrees they may be involved in health policy public.

4. RECOMMENDATIONS

4.1 The role of employees

The econometric results show that workers with university-level studies, are most likely to benefit from the components of a safety. Indeed, the coefficient associated with the variable "education (university level)" is significant at the 10% level.

This result shows that education is a powerful way to demand good working conditions and joined most of the work on the fundamental role of education investment. Workers are therefore encouraged to develop their skills through ongoing training, adaptive and breakouts. The evolution continues to constantly market economy in which the enterprises are located (employees) oblige.

4.2 The influence of trade unions

The union is a social actor in the business. In pursuing their goal is to improve the working conditions of employees, trade unions participate in the social and economic balance of the company. The econometric results confirm that unions play a vital role in the security of employees. We recommend that employees are organizing more and more to see their just demands succeed. However, too many claims are likely to dampen corporate profitability and well being of employees. In any event, the participatory approach between the company's internal stakeholders: employers, employees, trade union, will find appropriate solutions to solve problems that arise.

4.3 The business benefits of good safety and good health (European Agency for Safety and Health at Work, 2008)

The benefits for a company with a good security and good health at work are:

- The brand value and company reputation
- Investor confidence
- Reducing the cost of accidents and diseases
- Insurance control costs
- Worker's productivity and efficiency
- Employees motivation and commitment
- Social Responsibility
- Gaining new customers and retaining customers

5 CONCLUSION

The concept of security is part of the Corporate Social Responsibility (CSR). The corporate image internally and externally thereof account. Suppliers, employees, customers now have a considerable weight even to influence the result of the companies, if they pretend to ignore the rules surrounding CSR, including: acceptable working conditions, fair pay the fight against child labor, workplace safety, etc.

The security was the main subject of this article analyzed through the determinants that are these. The results support the view that education, unionization are all factors that influence seriously obtaining reassuring working conditions.

Employees should be formed continuously, but companies are also encouraged to understand that the establishment of safe working conditions involved in garanting them more values (investor confidence, improved image, motivation of employees, profit, etc. . .)

6. REFERENCES BIBLIOGRAPHIQUES

[1] Abdelkhalek T. et al (2009), " Mesures de la qualité de l'emploi au Maroc: vers la construction d'un indicateur composite. " *gender and work in the mena region, working papers series N°5. CRDI.*

[2] Akyeampong B. Ernest (2002), "La syndicalisation et les avantages sociaux." *Statistiques Canada n°75-001-XIF.*

[3] Becker Gary (1975), *Human capital*. Columbia University Press. 2è Edition.

[4] BIT (2007*), L'agenda du travail décent en Afrique: 2007-2015. Onzième réunion régionale africaine.* Addis Beba, Ethiopie, 2007. Rapport du Directeur Général.

[5] Bonnechère Michèle (2007), L'optique du travail decent. *Working papers Doctrine. Le droit ouvrier,* Février 2007.

[6] Bosch Gerhard (2004), "La qualité de l'emploi en Allemagne." *Bilan printemps 2004. Observatoire Européen de l'Emploi.*

[7] Centre d'Etudes de l'Emploi (2006), *La qualité de l'emploi*. Collection Repères.

[8] Commission des communautés européennes (2006), *Promouvoir un travail décent pour tous : la contribution de l'union à la mise en œuvre de l'agenda du travail décent dans le monde*. SEC (2006) 643.

[9] Davoine Lucie (2006), "Les déterminants de la satisfaction au travail en Europe : l'importance du contexte". *Document de travail*. Centre d'Economie de la Sorbonne, Université Paris I ; Centre d'Etudes de l'Emploi (CEE).

[10] Delorme Jacques (2004), "Quelques données internationales sur le temps de travail", *Document de travail.* Analyses Economiques

[11] Duhautois Richard et Gonzales Lucie (2007), "Hétérogénéité des contrats de travail et performances des entreprises en France : une étude empirique entre 1996 et 2001". *Document de travail n°79*, Centre d'Etudes de l'Emploi (CEE).

[12] Erbès-Seguin Sabine (2010), *La sociologie du travail*. Collection Repères.

[13] Freyssinet jacques (2000), "Plein emploi, droit au travail, emploi convenable". *Revue de l'IRES n° 34-2000/3.*

[14]Ghai D. (2003), "Travail décent : concept et indicateurs." *Revue Internationale du Travail*. Vol 142. N° 2.

[15] Hurlin Christophe (2003), *Econométrie des variables qualitatives*. Maîtrise d'économétrie. Université d'Orléans.

[16] Institut de la Statistique de Québec (2008), "La qualité de l'emploi au Québec. Développement conceptuels et création d'une typologie : Etat actuel de la réflexion." *Document de travail.*

[17] Jardim Chaves Maria Apatecida (2002), "Les syndicats comme acteurs de la gouvernance : nouvelles stratégies". *Document de travail.*

[18] Laurent Eric (2013), *Le scandale des délocalisations.* Editions Pocket.

[19] N'Gratier Antoine (2013), "Analyse empirique des déterminants de la satisfaction au travail et gouvernance d'entreprise en Côte d'Ivoire". *Mémoire de Master II en Gestion et Responsabilité Sociétale des Entreprises.* Ecole des Sciences Morales et Politiques d'Afrique de l'Ouest. Centre de Recherche et d'Action pour la Paix. Cocody, Abidjan.

[20] Ramaux Christophe (?) : Emploi : Eloge de la stabilité. L'Etat social contre la flexicurité. Ed Mille et une nuit.

[21] Sangster Deryn et Wortsman Arlène (2000), "Perspectives syndicales et patronale sur les défis reliés aux compétences au Canada". *Document de travail, Vol 4 n° 3.*

[22] Shields Margot (2000), Les longues heures de travail et la santé. Rapport de travail. Statistique Canada N° 75-001, Perspectives.

[23] Van Haeperen Béatrice (2000), "Formes d'emploi et flexibilité du marché du travail : Evolutions récentes en Belgique." *Analyse économiques et prévisions, Juin 2000.*