

EXTENSION IMPLICATIONS OF THE SOCIAL AND ECONOMIC CHARACTERISTICS OF HUMAN RESOURCES IN THE BAKING INDUSTRY IN SOUTH-EASTERN NIGERIA

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ABSTRACT

The social and economic characteristics of the human resources in the baking industry in south-eastern Nigeria were studied. The human resources used for the study were the managers, supervisors and factory floor workers. The study was done using an enterprise level interview schedule in Onitsha, Owerri, Aba and Nsukka in south-eastern Nigeria. Almost all the bakeries studied (96.9%) were owned and managed by the owners or their family members. The managers were aged between 21 and over 60 years with more males (75%), than females (25%). Many of them (43.8%) had completed secondary and 21.9% completed primary school education. Many of the managers (43.8%) claimed that they could not estimate their monthly income whereas 28.1% claimed they earned not more than ₦10,000 per month. The ages of the supervisors were between 20 and 50 years. Many of the supervisors had completed secondary (42.9%) and 31.9% their primary school education. The monthly income of the supervisors ranged between ₦1,000 and ₦10,000 per month. Most of the factory floor workers were aged between 21 and 60 years. Many of them had completed their secondary school education (44.8%), while 22.9% had completed their primary education. The monthly income of the factory-floor workers ranged between less than ₦1000 and ₦8,000 with 98% of the workers earning not more than ₦5,000. The salaries were obviously low for all workers. Of all the workers, only 6.1% of the managers had for-

INTRODUCTION

The baking industry is comprised of industries producing and marketing baked products such as bread, cake, rolls, pie, cookies, pastries, muffins, pizzas etc. (Amendola, 1972; Johnson and Peterson, 1974; and IFT, 1995). It is an agro- industry because its major raw materials are derived from the agricultural sector. It is part of the global economy which is undergoing a series of sweeping changes, driven by rapid technical progress in the industrialised economies. These changes are

fundamentally altering the methods and organisations of the production of goods and services and the skills, information, infrastructure and institutions needed to operate an economy efficiently. The new paradigm of production involves not only new technologies (in the traditional sense) but also new management and organisational techniques, different forms of linkage between enterprises and tighter relations between industry, pure science and flow of information between economic agents. The nature of the

current industrial revolution is such that the long-term success of all productive systems, including the baking industry ultimately depends on the ability to harness new technologies (UN, 1995).

The efficiency of agro-industry as a whole depends on the quality, skills, and personal motivations of entrepreneurs, managers and workers within individual enterprises and the various systems supporting their operations. Governments remain active in this sector in the provision of extension, training, and research, advisory and marketing services. If the baking industry in south eastern Nigeria is to experience the level of change going on in the industrial sector in this century, its technological capabilities must be transformed to meet the challenges associated with it.

In order to achieve this, it is necessary to study the social and economic characteristics of the human resources or workers in the bakeries in order to determine areas of extension intervention needed. These socio-economic characteristics include among other things level and type of education and training, age, marital status, number of children and their ages, household number, gender, income and income yielding and recreational activities. Other socio-economic characteristics include experience, tradition, culture, values and institutional affiliations, awareness about innovation, adoption and diffusion rates and learning and the relationships of these characteristics among different target groups (Biesanz and Biesanz, 1973; Enwere and Madukwe, 2000; Igbokwe, 2000).

Objective of the study

The objective of the research was to study the social and economic characteristics of the various categories of workers in the bakeries in south-eastern Nigeria in order to determine areas of extension intervention. The specific objectives were to determine:

1. the various categories of workers in the bakeries
2. their social characteristics

3. their economic characteristics and
4. areas of extension intervention.

METHODOLOGY

Study area, population and sample size

The study was conducted in four states in south-eastern Nigeria. These four states were purposively selected. They include Anambra, Imo, Abia and Enugu states. Four commercial towns (one from each state) which had many bakeries were also purposively selected from the four states to include Onitsha, Owerri, Aba, and Nsukka. Thirty-two bakeries: 9 in Onitsha, 8 in Owerri, 8 in Aba and 7 in Nsukka who were willing to participate in the study were used. Thirty two managers, 28 supervisors and 96 factory-floor workers were used. This gave a total sample of 156 respondents for the study.

Data collection and analysis

The instrument used for data collection was a modified interview schedule for an enterprise-level survey (Marsden and Garzia, 1998; Enwere, 2000). Three different interview schedules were designed and administered to the managers, supervisors and factory-floor workers in order to obtain information relevant to their levels. Additional information was collected through direct observation of activities and participation in the work in the bakeries. The data collected from the study were analysed using multiple classification, percentages and correlation analysis (Little and Hills, 1978).

RESULTS AND DISCUSSION

Categories of workers

The categories of workers in the bakeries studied were the managers, supervisors and factory-floor workers. Almost all the bakeries studied (96.9%) were owned and managed by the owners or their family members who performed the function of managers so they were classified as managers. Only 3.1% of the bakeries employed a manager (Table 1). Managers are the people who see that things

Table 1: Social and economic characteristics of managers

Socio-economic Characteristics	Onitsha % (N=9)	Owerri % (N=8)	Aba % (N=8)	Nsukka % (N=7)	Total % (N=32)
MANAGER/OWNER	55.6	75.0	37.5	85.7	62.5
Manager\part owner	44.4	25.0	37.5	0	28.1
Manager (employed)	0	0	25.0	14.3	9.4
Age (years)					
21 – 25	22.2	0	12.5	0	9.4
26 - 30	0	12.5	0	14.3	6.3
31 – 35	11.1	12.5	37.5	14.3	18.8
36 – 40	11.1	12.5	12.5	14.3	12.5
41 – 45	33.3	12.5	25.0	28.6	25.0
46 – 50	11.1	12.5	0	14.3	9.4
51 – 55	11.1	12.5	0	0	6.3
56 – 60	0	0	0	0	0
Above 60	0	25.0	12.5	14.3	12.5
SEX					
Male	66.7	87.5	75.0	71.4	75.0
Female	33.3	12.5	25.0	28.6	25.0
Marital Status					
Married	66.7	100.0	62.5	100.0	81.3
Single	22.2	0	37.5	0	15.6
Widowed	11.1	0	0	0	3.1
Educational Qualification					
No education	0	12.5	0	14.3	6.3
Primary (incomplete)	11.1	0	0	0	3.1
Primary (completed)	11.1	37.5	12.5	28.6	21.9
Secondary (incomplete)	0	0	25.0	0	6.3
Secondary (completed)	66.7	12.5	50.0	42.9	43.8
Teacher training	0	0	0	0	0
OND, NCE, Nursing	0	12.5	0	0	6.3
Degree (B.Sc// HND)	11.1	12.5	12.5	14.3	9.4
Higher degree	0	12.5	0	0	3.1
NUMBER OF CHILDREN					
0	22.2	12.5	50.0	0	21.9
1 – 2	11.1	12.5	0	42.9	15.6
3 – 4	33.3	25.0	25.0	0	21.9
5 – 6	44.4	37.5	0	14.3	18.8
7 – 8	0	12.5	0	42.9	9.4
9 – 10	0	0	12.5	0	9.0
Above 10	0	0	0	0	0
Did not disclose	0	0	0	14.3	3.1

are done. They operate under a variety of titles, from president to foreman and can be found at all levels within the organization. Although the managers normally do not actually perform the work, they are usually responsible for its

successful completion (Beierlien *et al.*, 1995). The supervisors oversee the successful performance of the tasks assigned to workers whereas the factory- floor workers actually perform the tasks in the bakeries.

Table 1 (contd.)

Socio-economic Characteristics	Onitsha % (N=9)	Owerri % (N=8)	Aba % (N=8)	Nsukka % (N=7)	Total % (N=32)
Number of children living with manager					
0	33.3	12.5	50.0	0	25.0
1-2	11.1	12.5	0	42.9	15.6
3-4	44.4	37.5	25.0	14.3	28.1
5-6	22.2	25.0	0	14.3	15.6
7-8	0	12.5	12.5	14.3	9.4
9-10	0	12.5	12.5	0	3.1
Above 10	0	0	0	0	0
Did not disclose	0	0	0	14.3	3.1
Total number of people living in manager's household					
1-2	0	0	12.5	0	3.1
3-4	0	12.5	12.5	14.3	9.4
5-6	44.4	0	12.5	28.6	21.9
7-8	33.3	37.5	0	28.6	25.0
9-10	11.1	37.5	12.5	14.3	21.9
Above 10	11.1	12.5	37.5	14.3	18.8
Number of people in manager's household who are working					
1	11.1	25.0	50.0	28.6	28.1
2	66.7	75.0	25.0	71.4	59.4
3	22.2	0	12.5	0	9.4
4	0	0	12.5	0	3.1
Monthly income					
₦ 0 - ₦ 10,000	33.3	12.5	25.0	42.9	28.1
₦ 11 - ₦ 20,000	0	12.5	0	0	3.1
₦ 21 - ₦ 30,000	11.1	12.5	12.5	14.3	6.3
₦ 31 - ₦ 40,000	11.1	0	0	0	3.1
₦ 41 - ₦ 50,000	22.2	12.5	12.5	14.3	9.4
Above ₦ 50,000	22.2	0	0	0	6.3
Could not estimate	22.2	50.0	62.2	42.9	43.8
Involved in training workers					
Formal training in baking business	0	12.5	12.5	14.3	6.3
Areas of training*					
Management	0	0	12.5	0	3.1
Equipment maintenance and repair	0	12.5	12.5	0	6.3
Bread production			12.5	12.5	6.3
Non-formal training in the bakery*					
Sacks production	11.1	25.0	25.0	37.5	25.0
Bread production	100.0	100.0	100.0	87.2	100.0
Sales/ marketing	0		25.0	0	6.3
INFORMAL TRAINING					
Training workers to operate equipment by equipment suppliers	88.9	62.5	75.0	14.3	62.5
Training workers for minor repairs and maintenance by equipment suppliers	88.9	50.0	75.0	14.3	59.4
NAFDAC workshop /seminar	66.7	62.5	50.0	0	46.9
Demonstration/workshop from raw material suppliers	55.6	62.5	37.5	0	40.6
Seminar by Health department of local government	0	12.5	12.5	0	6.3

*Multiple responses

Managers

The socio-economic characteristics of the managers are shown in Table 1. The age of the managers ranged from between 21 to above 60 years. However, more managers were within the age of 41 – 45 years (25.0%). More of the managers were males (75%), and the female constituted of only 25% of all the managers studied. The trend was similar in all locations studied. The study showed that generally many managers had completed secondary school education (43.8%). The situation was different in Owerri bakeries where more of the managers completed their primary school education (37.5%). Only one manager (3.1%) had a first degree in political science.

Majority of the managers were married (81.3%) while 15.6% were single and 3.1% were widowed. The trend was similar in all locations. The managers generally had between 0 to 6 children. There is no particular trend in this characteristic. In Onitsha and Owerri more of the managers had 5 to 6 children (44.4% and 37.5%, respectively), whereas in Aba more of the managers had no children (50.0%). In Nsukka more of the managers had 1 – 2 children (42.9%). Some of these children were still living with their parents. In Onitsha 44.4% and Owerri 37.5% of the managers had, 3 – 4 of their children living with them, whereas in Aba, 50% of the managers did not have any of their children living with them, and at Nsukka, 42.9% of the managers had 1- 2 of their children living with them.

Generally, there is no trend in the number of people living in the manager's household as will be seen in Table 1. In Onitsha, many managers had 5 – 8 people (77.8%) living in their household, whereas in Owerri greater percentage of manager (75.0%) had 7 –10 people living in their household. In Aba, many managers had 9 – 10 people living in their household (50.0%) whereas in Nsukka majority of managers had 5 – 8 people living in their household.

The study revealed that where the manager was owner or part owner of the bakery, his children or other members of his household participated in the work in the bakery. In fact,

many of them learned the art of bread production from their childhood and later established their own bakeries. Children of managers/owners established some of the bakeries studied.

The study also revealed that 59.4% of the managers had at least two people working in their households and earning income. The trend was different in Aba where majority of managers (50.0%) had only one-person earning income. When two or more persons earn income in a household, it contributes to their economic well being and improves standard of living.

A high percentage of the managers (43.8%) claimed that they could not estimate their monthly income. The trend was similar in all locations except in Onitsha. These were the managers who were also owner or part owner of the bakery. In this category, 28.1% of the managers claimed they earned not more than N10,000 per month. The values given for monthly income by the managers may not be true for two reasons. Some of them expressed the fear that if they disclosed their income it would be subjected to tax. Others were not able to calculate their income because the business fluctuated from time to time and they did not keep proper business records.

No business can perform effectively without proper accounting and recording. The value of an accounting system rests on its accuracy, what the balance sheet, profit and loss statement tells them about the financial position of their operation (Beierlien *et al.*, 1995). The managers who could not estimate their income should make sure that their basic financial statements for business control are well handled.

Only 6.3% of the managers had formal training in baking business in Aba and Nsukka (American Institute of Bakers and Domestic Science School, respectively). All the managers acquired most of their skills from non-formal training on the job in the bakery. However, some acquired in-formal training from equipment and raw material suppliers and National Agency for Food and Drug Administration and Control (NAFDAC). Generally, all the managers (100.0%) acquired

training in bread production, 25.0% in snacks production and in other areas. All the managers were involved in training other workers in the bakery.

Supervisors

Socio-economic characteristics of supervisors are shown in Table 2. Twenty-eight bakeries (87.5%) had supervisors while four (12.5%) did not have. Their ages span between 20 and 50 years. The age distribution shows no particular trend. There were more male supervisors (85.8%) than females (14.3%). In Aba bakeries, there was no female supervisor. There were as many married as unmarried supervisors in the bakeries studied.

The study also revealed that more supervisors had completed secondary school education (42.9%). This was the trend in Aba and Nsukka where 50.0% and 83.3%, respectively, had completed their secondary school education. However, in Onitsha more supervisors (66.7%) did not complete their secondary school education and in Owerri more supervisors (50.0%) completed only their primary school education.

Generally, greater percentage of supervisors had no children (53.6%) and this was the trend in all locations studied. Others had 1 – 6 children. The number of children living with the supervisor was similar to the number of their children. This implies that all their children were still living with them. The supervisors also had 1 to over 10 people living in their household.

The monthly income of the supervisors ranged between N1,000 and N10,000 per month. More supervisors earned between N2000 and N3000 per month. Some of the supervisors who did not earn salary were family members whose needs were also met by the owner of the bakery but not in form of salary. A few of the supervisors did not disclose their salaries.

Almost all the supervisors were permanent employees (96.4%) while 3.8% were temporary. More supervisors worked in both production and sales (46.4%) and production only (42.9%) than sales (Table 2). Actually, the supervisors usually supervised both production

and sales. In most of the bakeries, they had only one supervisor, who acted when the manager was away. More supervisors had 6 – 10 people under them.

All the supervisors were involved in training other workers because they were supposed to be experts in their jobs. According to Beierlien *et al.* (1995), a key element in the success of many business ventures is often the quality of supervision. A motivated work force with faith in its supervisors can often make the difference between success and failure. None of the supervisors had formal training in bakery business but all acquired their skills through non-formal training in the bakery. Generally, 96.4% received training in bread production, 21.4% in sales /marketing and only 3.6% in snacks production. All of them were involved in training other workers in the bakery.

Factory-floor workers

The socio-economic characteristics of factory-floor workers are shown in Table 3. Most of the workers were aged between 21 and 30 years. A few were between 41 and 60 years. Bakery work demands a lot of human energy so only the young ones who still have a lot of energy can withstand the energy demands. Thus the factory floor workers were generally younger than the managers and supervisors. More of the factory-floor workers were single (70.8%) than married (29.9%).

A high proportion of the factory-floor workers (44.8%) had completed their secondary school education. Fewer factory-floor workers (18.8%) had not completed their secondary school education and 22.9% had completed their primary education. The trend was similar in all the four locations studied, except for Nsukka bakeries, which did not have such category of workers. A few had obtained

TABLE 2: SOCIO-ECONOMIC CHARACTERISTICS OF SUPERVISORS

Socio-economic characteristics	Onitsha % (N=6)	Owerri % (N=8)	Aba % (N=8)	Nsukka % (N=6)	Total % (N=28)
Number of bakeries with supervisors					
With supervisors	66.7	100.0	100.0	85.7	87.5
Without supervisors	33.3	0	0	14.3	12.5
AGE (YEARS)					
Up 20	0	12.5	12.5	0	7.1
21-25	33.3	25.0	12.5	50.0	28.6
26-30	33.3	12.5	25.0	16.7	21.4
31-35	0	12.5	25.0	16.7	14.3
36-40	0	12.5	25.0	0	10.7
41-45	0	0	0	16.7	3.8
46-50	33.3	25.0	0	0	14.3
SEX					
Male	66.7	87.5	100.0	83.6	85.8
Female	33.7	12.5	0	16.7	14.3
MARITAL STATUS					
Single	50.0	62.5	37.5	50.0	50.0
Married	50.0	37.5	62.5	50.0	50.0
Highest educational qualification					
No education	0	0	0	0	0
Primary (incomplete)	0	0	12.5	0	3.6
Primary (completed)	33.3	50.0	25.0	16.7	32.1
Secondary (incomplete)	66.7	12.5	12.5	0	21.4
Secondary (completed)	0	37.5	50.0	83.3	42.9
Total number of biological children					
0	50.0	62.5	50.0	50.0	53.6
1-2	16.7	0	25.0	16.7	14.3
3-4	16.7	25.0	12.5	16.7	17.9
5-6	16.7	0	12.5	16.7	10.7
Did not disclose		12.5			3.6
Number of children living with supervisor					
0	50.0	62.5	50.0	50.0	53.6
1-2	16.7	0	25.0	16.7	14.3
3-4	16.7	25.0	12.5	16.7	17.9
5-6	16.7	0	12.5	16.7	10.7
Did not disclose		12.5			3.6
Number of supervisors living in bakery quarters					
Yes	50.0	37.5	12.5	0	25.0
No	50.0	62.5	87.5	100.0	75.0
Number of people living in supervisor's household					
1-2	0	0	12.5	0	3.6
3-4	0	0	50.0	16.7	17.9
5-6	33.3	0	0	16.7	10.7
7-8	0	0	12.5	33.3	10.7
9-10	16.7	25.0	12.5	33.3	21.4
Above 10		12.5			3.6

Table 2 (contd.)

Socio-economic characteristics	Onitsha % (N=6)	Owerri % (N=8)	Aba % (N=8)	Nsukka % (N=6)	Total % (N=28)
MONTHLY INCOME					
Not on salary	50.0	25.0	0	33.3	25.0
Less than ₦1000	0	0	0	0	0
₦1000-2000	0	12.5	12.5	16.7	10.7
₦2001-3000	50.0	12.5	0	33.3	21.04
₦3001-4000		37.5	25.0	0	17.9
₦4001-5000			12.5	16.7	7.1
₦5001-6000					0
₦6001-7000					0
₦7001-8000			12.5		3.6
₦8001-9000			0		0
₦9001-10000		12.5	12.5		7.1
Did not disclose salary			25.0		7.1
Involvement in training of workers	100.0	100.0	100.0	100.0	100.0
Type of employee					
Permanent	100.0	100.0	100.0	83.7	96.4
Temporary	0	0	0	16.7	3.6
Number of people working under supervisor					
1-5	33.3	12.5	12.5	0	14.3
6-10	50.0	62.5	12.5	50.0	42.9
11-15	0	25.01	25.0	33.3	21.4
16-20	0		25.0	0	7.1
21-25	0		12.5	0	3.6
26-30	0		0	16.7	3.6
Above 30	16.7		12.5		7.1
Number of supervisors trained in baking business	100.0	100.0	100.0	100.0	100.0
Areas of training*					
Bread production	100.0	100.0	87.5	100.0	96.4
Snacks production	16.7	0	12.5	0	3.6
Sales / marketing	16.7	12.5	37.5	16.7	21.4
Supervision	0	0	0	0	0
Formal training in baking business	0	0	0	0	0

*Multiple responses

Ordinary National Diploma -OND (1.0%) and Higher National Diploma -HND (1.0%).

There were also more male than female. The trend is similar in all locations. Greater percentage of the factory floor-workers did not have children (71.4%) while others had 1 – 8 children. The number of workers decreased as number of children increased. The same percentage of factory-floor workers (71.4%) was single. The trend was similar for the number of children living with the workers.

A larger proportion of the factory-floor workers (63.5%) lived in the bakery quarters and the rest lived outside. Some of the workers who lived in bakery quarters in Owerri lived with members of their household while others lived

outside the bakery with their families. It was observed that at Nsukka more of the factory-workers (71.4%) lived with their households outside the bakery. However, only 28.6% lived in bakery quarters. The number of people in their households ranged between 1 and above 10. The greater percentage of factory-floor workers lived in households of 3 – 6 people.

The monthly income of the factory-floor workers ranged between less than N1000 and N8,000. Almost 98% of the factory-floor workers earned not more than N5,000. The highest proportion (34.4%) earned between N1000 and N2000, except in Onitsha bakeries where more people earned between N2001 and N3000. These salaries were obviously low. It is

Table 3: Socio-economic characteristics of factory-floor workers

Socio-economic characteristics	Onitsha % (N= 27)	Owerri % (N=24)	Aba % (N=24)	Nsukka % (N=21)	Total % (N= 96)
Age (years)					
Up to 20	14.8	20.8	8.3	19.0	15.6
21-25	37.0	20.8	41.7	47.6	36.5
26-30	29.6	20.8	41.7	9.5	26.0
31-35	11.1	12.5	4.2	0	7.3
36-40	7.4	0	0	19.0	5.2
41-45		4.2	0	4.8	1.0
46-50		8.3	0		1.0
51-55			0		2.1
56-60			4.2		1.0
MARITAL STATUS					
Single	85.2	54.2	70.8	71.4	70.8
Married	14.8	45.8	29.2	28.6	29.2
Highest educational qualification					
No education			4.2	9.5	3.1
Primary (incomplete)		4.2	12.5	9.5	6.3
Primary (completed)	44.4	16.7	16.7	19.0	22.9
Secondary (incomplete)	14.8	37.5	20.8	0	18.8
Secondary (completed)	37.0	41.7	41.7	61.9	44.8
OND					1.0
Degree/HND			4.2		1.0
SEX					
Male	70.4	70.8	62.5	52.4	64.6
Female	29.6	29.2	37.5	47.6	35.4
Total number of biological children					
0	92.6	62.5	79.2	71.4	77.1
1-2	0	12.5	8.3	14.3	8.3
3-4	7.4	12.5	8.3	9.5	9.4
5-6		8.3	4.2	4.8	4.2
7-8		4.2			1.0
Number of children living with factory-floor worker					
0	96.3	66.7	79.2	71.4	77.1
1-2	0	12.5	8.3	14.3	8.3
3-4	3.7	12.5	8.3	9.5	9.4
5-6		8.3	4.2	4.8	4.2
7-8		4.2			1.0
Number of workers living in bakery quarters	85.2	62.5	70.8	28.6	63.5
Number of people living in worker's household					
1-2	7.4	4.2	23.8	0	8.3
3-4	0	4.2	28.6	23.8	12.5
5-6	0	12.5	23.8	19.2	12.5
7-8	7.4	8.3	4.8	14.3	8.3
9-10				4.8	1.0
Above 10				9.5	2.1

Table 3 (contd.)

Socio-economic characteristics	Onitsha % (N= 27)	Owerri % (N=24)	Aba % (N=24)	Nsukka % (N=21)	Total % (N= 96)
MONTHLY INCOME					
Not on salary	3.7	4.2	16.7	19.0	10.4
Less than ₦ 1000	0	0	0	14.3	3.1
₦ 1000-2000	29.6	33.3	37.5	38.1	34.4
₦ 2001-3000	37.0	25.0	29.2	14.3	27.1
₦ 3001-4000	22.2	12.5	8.3	14.3	14.6
₦ 4001-5000	3.7	25.0	4.2		8.3
₦ 5001-6000					
₦ 6001-7000					
₦ 7001-8000			4.2		1.0
On commission	3.7				1.0
Involvement of worker in training other workers in the bakery	96.3	95.8	95.8	100.0	96.9
TYPE OF EMPLOYEE					
Permanent	92.6	100.0	100.0	90.5	95.8
Temporary	7.4	0	0	9.5	4.2
Number of factory floor workers trained in baking business	81.5	83.3	66.7	71.4	76.0
Areas of training*					
Weighing of ingredients	0	8.3	0	0	2.1
Mixing	51.8	58.3	12.5	9.5	34.4
Kneading (milling)	29.6	29.2	20.8	14.2	24.0
Scalding and cutting					
Moulding	88.9	83.3	29.2	52.4	64.6
Panning					
Baking	33.3	33.3	16.7	9.5	24.0
Removing bread from pans, arranging and loading	7.4	8.3	0	0	4.2
Machine repair and maintenance	0	0	0	0	0
Sales	3.7	4.2	29.2	0	9.4
All aspects of production	7.4	8.3	16.7	14.2	11.5
Pan cleaning	7.4	4.2	4.2	23.8	9.4
Formal training in baking business	0	0	0	0	0

*Multiple responses

only small households that can survive on such poor salaries.

From all locations studied, 94.8% of the factory-floor workers had been trained. A few of them (usually new workers) were yet to be trained in bread production. Majority (64.6%) was trained in table activities (scaling, cutting, moulding and panning of dough). These are some of the easiest and less demanding tasks in the bakery. These tasks took short periods of time to learn and they have no gender-barrier. Next to these is training in mixing (34.4%) and baking (24%) and kneading (24.0%). The factory-floor workers were also involved in training other workers. Almost all of them (96.9%) had trained other workers. There were more permanent employees (95.8%), than temporary employees (4.2%). The temporary employees were usually newly recruited workers or family members who did not work full time.

Importance of the socio-economic characteristics of the human resources

Generally, the effectiveness of any organization is measured by one significant and objective criterion, namely, the quality of its products or services. The quality of its products and services is to a large extent a function of the calibre of human resources or manpower component of the organization's production resources. It is only when the human resources are adequately qualified to do the job that we can hope that the material resources or inputs can be effectively allocated and utilized in the most optimal manner. Manpower is therefore, the catalyst that makes all the other resources fail or succeed (Osuji, 1992).

Consequently, in the baking industry, age, marital status, training and education, gender, number of children and household numbers, residence and income affect to a greater extent the performance of the worker. Age, education and training to a reasonable extent help the worker to appreciate the importance of his work and environment. Gender determines the kind of work to be allocated to the worker as seen in the gender analysis of tasks in the baking industry. The number of children and

people living in the household may determine the level of entanglements. This may sometimes distract the worker from his job or create stress or reduce performance on the job.

Income or wage is a very important motivational factor because it helps to satisfy human needs. Human beings are complex organisms that are driven by many physiological and psychological needs. These basic needs can serve as powerful motivators of human activities. According to Maslow's theory, the pyramid of human needs which have to be satisfied is divided into five levels – physiological needs, safety needs, belonging needs, esteem needs and self-fulfilment or self-actualisation needs. The physiological needs are at the base of the pyramid and self-fulfilment needs at the apex (Beierlien *et al.*, 1995).

The income generated from work is used to satisfy first the physiological needs (water, food, clothing and shelter) before the other needs. Thus, pay level is an important motivational factor. In the baking industry the income levels of most workers were far below the new federal and state governments'

minimum living wage of ₦5,000 to ₦7,500. This single factor was responsible for the high mobility of labour because their needs were not adequately met by their income. Work should be a valuable human activity that allows individuals to meet their basic physical and physiological needs. Fostering a happy and productive worker not only benefits the firm and worker but also usually benefits society in general. Generally, the socio-economic characteristics of human resources are the indicators of quality of the work force.

Extension implications of the study

The study showed that many of the workers did not complete secondary school education. This situation is not satisfactory in this modern age where adequate education is required for people to achieve technological development required to appreciate and exploit their environment. Extension should encourage the bakery workers to improve their education by

enrolling in adult literacy programmes. Only a few of the managers had formal training in baking business and a few others participated in informal training, in seminars, workshops and demonstrations. None of the supervisors and factory-floor workers had formal training. They were generally trained on the job in the bakeries. They were more or less limited to the knowledge in the bakeries which was transferred from one generation of workers to the other. There is a need to update the knowledge and skills of all the bakery workers in the areas of bread production, sales, accounting, sanitation, fire prevention and control, supervision and management through formal and informal training. Training activities such as workshops, seminars and demonstrations organized by extension organizations and other agencies such as Raw Materials Research and Development Council (RMRDC), raw material suppliers, equipment suppliers training institutions such as universities, colleges of technology and polytechnics and NAFDAC are imperative. The wages paid by the bakeries to their workers were very low. Extension should encourage the bakeries to improve the wages of their workers so as to reduce labour mobility and increase productivity and profit.

CONCLUSION

The study has shown that the social and economic characteristics of the workers in the baking industry varied among the managers, supervisors and factory-floor workers with regards to age, marital status, number of children and household size. Although they earned different salaries, their pay packets were generally very poor. Most of them earned well below the minimum living wage currently paid by federal, state and local governments in Nigeria. This has led to high mobility of labour in the baking industry. Many bakery workers did not complete secondary school education. Almost all the workers acquired their knowledge and skills for the baking business mainly through non-formal on-the-job training in the bakeries assisted by fellow workers. Only two managers obtained formal training in

the baking business and a few others participated in informal training in seminars, workshops and demonstrations and equipment repair and maintenance from equipment suppliers. Consequently, there is need for rapid extension intervention in the areas of training and general education and wages in the baking industry.

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