

IMPROVING FINANCIAL PERFORMANCE ACCOUNTING IN THE CIRCULAR PRODUCTION

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Abstract: Circular manufacturing aims to recycle production waste and repurpose it into a manufacture process. In this sense, business stakeholders have an informational requirement to understand the financial consequences of organizing circular production. The article presents the methodology of recording financial results related to circular production and their presentation in accounting reports. New accounts and accounting correspondence are proposed, which are performance the information flows of financial results of circular production with double entry.

Keywords: food processing, circular production, financial implications of waste recycling, budgeting

JEL code: Q01, M 40

Research goals: explore the possibilities of recording the financial consequences of circular production organized by organizations and propose their accountability.

Research novelty: proposed new accounts and accounting reports, which create an opportunity to separate from the traditional financial results of business the financial consequences, arising from the organization of circular production.

Introduction

The business sector is currently not evaluated only in terms of economic success, but is also considered in terms of serving public interests [4,175]. If entrepreneurs, having private interests, mostly strive for profit and bypass public expectations from business, then the society also expects from the activities of organizations economical use of nature, preservation of the environment, use of non-waste technologies, for which organizations assume social responsibility.

In this sense, the stakeholders related to the activities of the organizations are interested in how well the organizations fulfill their social obligations and feel an informational requirement in that direction, which can be fulfilled by the reports published by the accounting department [5, 153]. Particularly, in order to increase the reputation of their business and secure their competitive positions, organizations are currently striving for the organization of circular production, which implies the implementation of the "collection – recycling - manufacture redirection" cycle of production waste. Therefore, it is a problem to obtain financial information related to that cycle, because the processing and use of waste implies not only revenues, but also costs [6, 111]. Consequently, the accounting and accounttability of the financial consequences of circular production in practice await their methodological solutions, which also apply to the food industry.

Research results

Food industry organizations bear a serious social responsibility for supplying the market with ecologically clean and healthy food. However, currently the scope of social responsibility for these organizations is expanding due to the emerging requirements of circular economy. In general, the term "economy" is mostly used in the professional literature, which mainly pursues public socio-economic interests. And for specific organizations, we suggest using the term "circular production", which in turn implies new approaches to accounting for financial results.

The concept of the circular economy is based on the effective management of waste recycling, as a result of which the consumption of natural resources is reduced, environmental pollution is prevented, and the opportunities for sustainable economic development are expanded [1, pp.14-16]. Moreover, waste collection and recycling can take place in two directions: outside the organization (see diagram 1), or within the organization itself (see diagram 2). In both cases, the recycled waste is returned to production and included in the product release cycle, creating additional financial results that create a demand for recording and accounting for the presentation of accountability to business stakeholders. When the financial consequences of "circular production" are revealed in the accounting report published by the organizations, then the business becomes accountable to the public for its social responsibility.

Thus, the Coca-Cola company put forward the following interesting and useful idea. customers return the bottle to the point of sale and receive a certain discount on their next purchase. The

returned bottle is used again and again. On average, each bottle is used 25 times, reducing plastic use by 90 percent and reducing toxic emissions by 47 percent [2, 20-21]. In addition, thanks to price discounts on waste collection and delivery, the number of loyal customers has increased, resulting in an average repurchase probability of 15 percent. Naturally, such disclosures in the published accounting reports, which will also be made with financial and value assessments, will make the company more attractive from the point of view of expansion of investment and business partners, as well as contribute to increasing the reputation of the business.

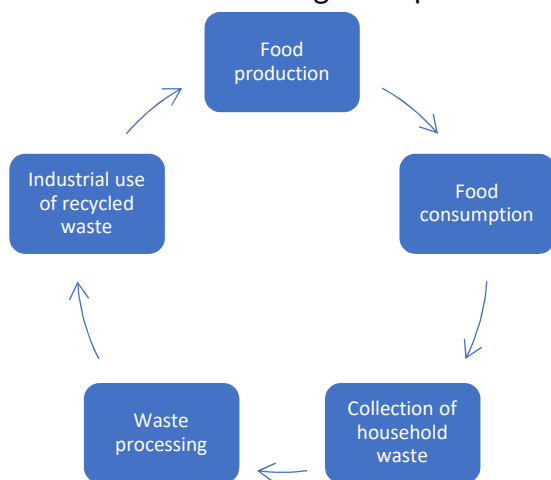


Figure 1. Organization of circular processing and consumption of food products under open cycle conditions¹²

An example of a closed cycle of organizing the circular processing of food in the food industry can be the processing of poultry litter in the production of poultry meat and its use as fodder

¹² Composed by authors

in the same production. Thus, in practice, it is possible to use the poultry waste collected in poultry factories not to dump and dissolve it, but to use it as subsistence feed in another production site for breeding worms. Feeding on bird droppings, the worms multiply and are subsequently included in the birds' feed ration. In this way, poultry waste is returned to the closed cycle of poultry production [3, pp. 344-345].

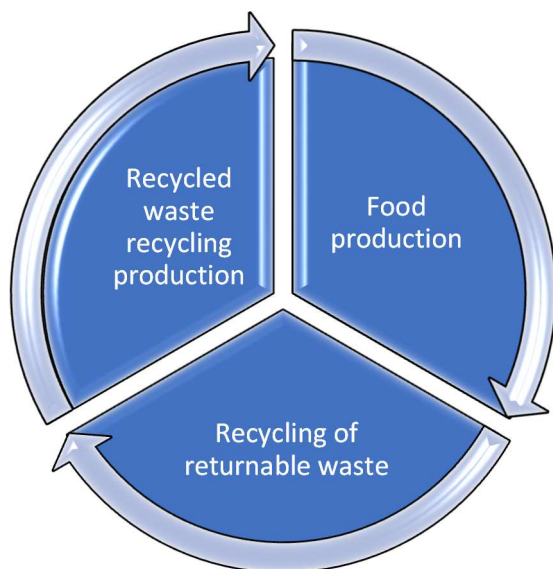


Figure 2. Organization of circular food processing in closed loop conditions¹³

¹³ Composed by authors

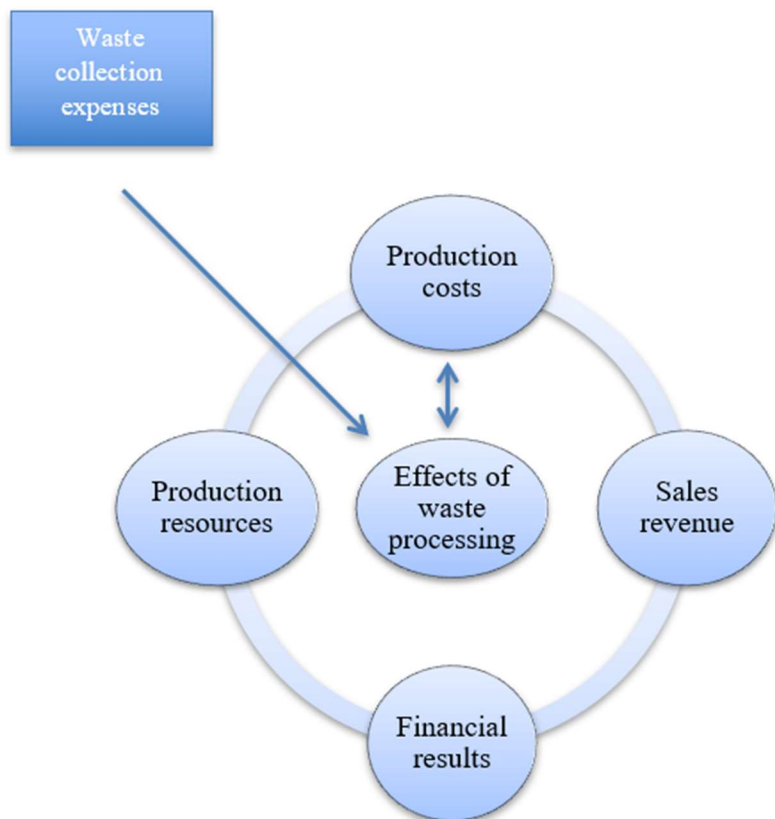


Figure 3. Financial flows of waste processing in a circular production system³

Thus, to ensure circular production, the poultry farm applies a waste recycling policy, applying both open and closed recycling cycles. Produced eggs are retailed in plastic boxes that are collected from buyers and reused when shipping the product (circular open loop). In this case, in order to encourage the collection of plastic waste, a 3% discount is set for the return of one box by buyers. In addition, poultry waste is collected in the factory and used for the

breeding of feedworms, which results in the waste being recycled into the production process (circular closed loop).

For reporting disclosures of information flows of financial results in circular production, we offer a number of new accounts and accounting reports, which record the financial consequences of waste processing in case of closed and open cycles on the basis of double entry.

- during the reporting period, the poultry factory spent 250 million AMD for production purposes, which were compensated at the expense of cash.

Dr Expenditures for the accounting period250

Cr Cash250

- the collected bird droppings have been formalized for 3 million AMD as returnable waste.

Dr Returnable waste.....3

Cr Production costs... 3

- poultry waste calcified for the purpose of growing fodder worms was attributed to the financial result of the circular production.

Dr Financial consequences of circular production.....3

Cr Returnable waste.....3

- the value of feed worms formed from processing was attributed to the financial result of circular production in the amount of 10 million AMD.

Dr Animal fodder.....10

Cr Financial consequences of circular production ...10

- the benefit of circular production was attributed to the financial result of the organization;

Dr Financial consequences of circular economy.....7

Cr Financial results.....7

- the expenses of the organization were written off in the amount of 247 million AMD to the financial expenses of the reporting period.

Dr Financial results.....247

Cr Expenditures of the reporting period247

- 2 million drams were paid to the buyers for the plastic containers collected for the sale of eggs from the retail sector.

Dr Returnable waste.....2

Cr Cash resources.....2

- the value of the collected plastic containers in the amount of 2 million AMD was attributed to the financial result of the circular economy.

Dr Financial consequences of circular production.....2

Cr Returnable waste.....2

- the collected plastic containers with a market value of 5 million AMD were entered as stocks.

Dr Package boxes5

Cr Financial consequences of circular production... 5

- the benefit of circular production was attributed to the financial result of the organization;

Dr Financial consequences of circular economy.....3

Cr Financial results.....3

- the income of the products sold by the poultry factory was formulated for 260 million drams.

Dr Cash.....260

Cr Total Income.....260

- the income of the organization was written off by 260 million AMD to the financial results of the reporting period.

Dr Revenues of the reporting period.....260

Cr Financial results.....260

- the profit of the reporting period of the poultry factory was formulated.

Dr Financial results.....23 (260 + 7 + 3-247)

CR Profit.....23

Conclusion

Thus, the use of the " Financial consequences of circular economy " account offered by us and also related accounting reports, creates an opportunity to separate the financial results of waste processing from the information flows and record them in the financial reports published by the organizations (see Figure 4). In this case, the beneficiaries related to the economic activity of the organization first of all have the opportunity to evaluate and monitor the process of implementation of the social responsibility assumed by the organization, clarifying in which directions the circular production is organized (open or closed). In addition, a report is presented on the financial results of the organization of circular production, separating them from the financial results of traditional management, with which investors receive clarifications and make decisions in the direction of expanding resources directed to the sustainable development of production.

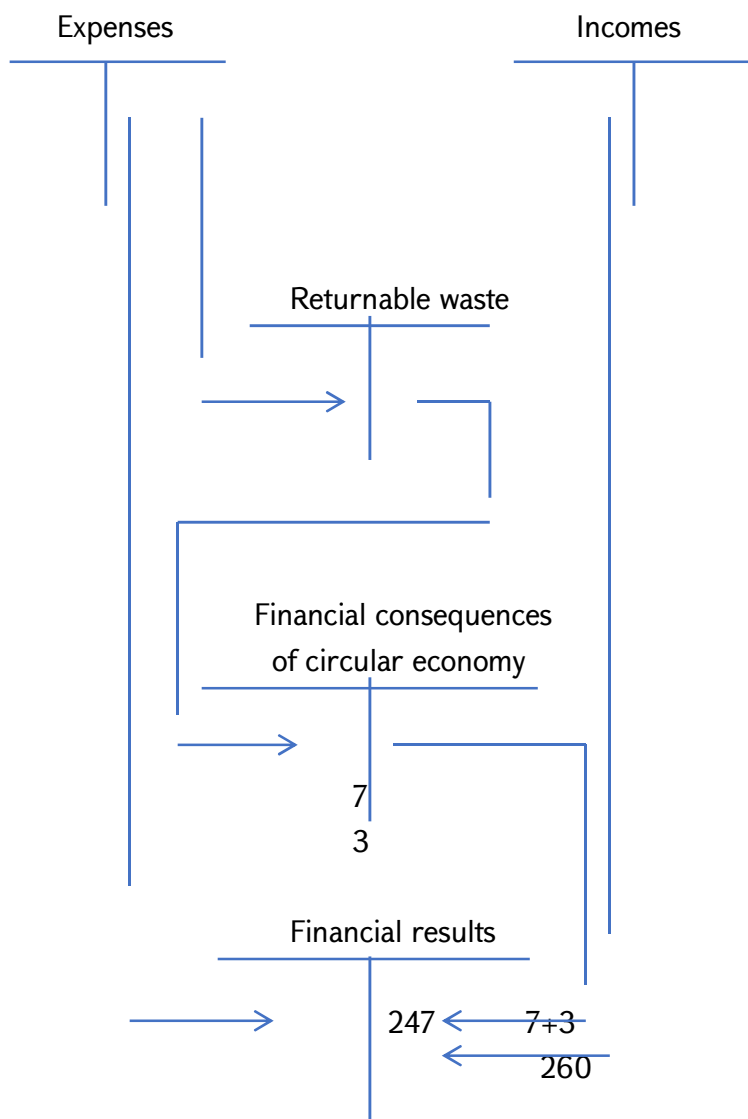


Figure. 4 Proposed approach to accounting for circular production financial flows¹⁴

¹⁴ Composed by authors

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Ալիսա Թադևոս

Վալենտինայի պետական համալսարան,
Մենդանթերքի մատակարարման կոմերցիոն
վերահսկիչ

Քնարիկ Խաչատրյան

Հայաստանի պետական տնտեսագիտական համալսարան,
ասպիրանտ

ՖԻՆԱՆՍԱԿԱՆ ԱՐԴՅՈՒՆՔՆԵՐԻ ՀԱՇՎԱՌՄԱՆ ԲԱՐԵԼԱՎՈՒՄԸ ՇՐՋԱՆԱՁԵՎ ԱՐՏԱԴՐՈՒԹՅՈՒՆՈՒՄ

Բանալի բառեր - սննդի վերամշակում, շրջանաձև արտադրություն, թափոնների վերամշակման ֆինանսական հետևանքներ, բյուջետավորում

Շրջանաձև արտադրությունը նպատակ է հետապնդում արտադրական թափոնները վերամշակելու և նորից վերաուղղելու արտադրական գործընթաց: Այս առումով, գործարարության շահառուների մոտ տեղեկատվական պահանջ է ձևավորվում, հասկանալու համար, թե ինչ ֆինանսական հետևանքներ են ծագում շրջանաձև արտադրության կազմակերպումից: Հոդվածում ներկայացվում է շրջանաձև արտադրությանը առնչվող ֆինանսական արդյունքների հաշվառման և հաշվապահական հաշվետվություններով դրանց ներկայացման մեթոդաբանություն:

Առաջարկվող «Շրջանաձև արտադրության ֆինանսական արդյունքներ» կառավարչական հաշվի և դրան առնչվող հաշվային թղթակցությունների կիրառումը հնարավորություն է

ստեղծում գործարարության տեղեկատվական հոսքերից առանձնացնելու թափոնների վերամշակման ֆինանսական արդյունքները և դրանք արձանագրելու կազմակերպությունների կողմից հրապարակվող ֆինանսական հաշվետվություններում՝ որպես հավելյալ եկամուտներ: Այս պարագայում կազմակերպության տնտեսական գործունեությանը առնչվող շահառուները նախ և առաջ հնարավորություն են ունենում գնահատելու ու մոնիտորինգի ենթարկելու գործարարության սոցիալական պատասխանատվության իրականացման ընթացքը, պարզաբանելով, թե ինչ ուղղություններով է ընթանում կազմակերպվող շրջանաձև արտադրությունը:

Բացի այդ, հաշվետվություն է ներկայացվում շրջանաձև արտադրության կազմակերպման ֆինանսական արդյունքների վերաբերյալ, դրանք առանձնացնելով ավանդական տնտեսավարման ֆինանսական արդյունքներից, որով ներդրողները պարզաբանումներ են ստանում և որոշումներ կայացնում իրենց կողմից արտադրության կայուն զարգացմանը ուղղվող ռեսուրսների ընդլայնման ուղղությամբ:

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