

UNIVERSITY OF TOLEDO INTERNAL AUDIT DEPARTMENT

MAKE AND PACKAGE PRODUCT

Control practices

The following control objectives provide a basis for strengthening your control environment for the process of making and packaging product. When you select an objective, you will access a list of the associated business risks and control practices. That information can serve as a checklist when you begin reviewing the strength of your current process controls.

This business risk and control information can help you assess your internal control environment and assist with the design and implementation of internal controls. Please note that this information is at the generic business process level and many companies will need to go beyond generic models to address the specific business processes that support the financial and nonfinancial disclosures being made. You can combine the insight of this business risk and control information with your industry-specific knowledge and understanding of your company's environment when conducting internal control assessments and designing and implementing recommendations.

Effectiveness and efficiency of operations

- A. Production downtime is minimized.
- B. Production quantity and quality specifications are met.
- C. Production is completed on a timely basis.
- D. Scrap is properly handled and accounted for.
- E. Packaging size and type are aligned with customers' needs and wants.
- F. Employees and management are provided with the information needed to control the process of making products.
- G. Relevant management information is provided to managers and empowered employees on a timely basis.
- H. All completed production orders are accurately and completely recorded on a timely basis.
- I. Standard costs calculations are complete, accurate, and properly authorized.
- J. Actual production costs are accurately and completely recorded on a timely basis.
- K. Production order and production cost transactions are reliably processed and reported.
- L. Sufficient and reliable accountability for inventory balances exists.
- M. Variiances are analyzed on a timely basis.
- N. Performance measurements used to control and improve the process are reliable.

Compliance with applicable laws and regulations

- A. The production process complies with applicable laws and regulations.
- B. Product packaging complies with applicable laws and regulations.

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Effectiveness and efficiency of operations

A. Production downtime is minimized.

Business risks

- Employees will perform excessive work steps as a result of engaging in a poorly organized production process.
- The company will incur excessive labor costs.
- Production will be delayed as a result of equipment failure, inadequate skilled labor, or natural or other disasters.
- Production runs will not be sufficient to meet product demand on a cost-effective basis.

Control practices

1. Maintain equipment in accordance with established preventative maintenance programs.
2. Assess the need to replace production equipment periodically (primarily a cost-benefit analysis).
3. Set the number of activities and the time to complete these activities at optimal levels.
4. Monitor set-up and changeover times continually.
5. Hire appropriately skilled people to support operational needs.
6. Hire seasonal and temporary labor as needed.
7. Ensure employees are adequately trained in the performance of their primary tasks.
8. Cross-train employees to proficiently perform other tasks in the production process.
9. Implement communication channels between production and human resources to provide feedback on the quality of employees and future employment requirements.
10. Monitor instances of production downtime, and identify and eliminate causes of downtime on a timely basis.
11. Maintain, update, and periodically test contingency and natural disaster plans.
12. Use relevant performance measures to identify production problems and opportunities to improve the process. Include measures such as: amount and percentage of production downtime analyzed by relevant causes, set-up and changeover times, and time taken for completion of schedules and regular maintenance tasks, and number or percentage of times maintenance is not performed at the scheduled time.

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B. Production quantity and quality specifications are met.

Business risks

- Quantities to be produced and/or sales forecasts will not be communicated clearly to production departments.
- Product specifications will be inappropriate or unclear.
- Products will be too difficult to produce.
- The goods produced will not meet customer specifications.
- Quality problems will not be detected and reported during the production process.
- Products will not be properly tested.
- Products will not be available to meet sales requirements.

Control practices

1. Design products with appropriate consideration given to potential production difficulties.
2. Use standard forms to communicate product specifications, both quantity and quality, and production plans.
3. Standardize production processes to the extent practicable.
4. Establish cross-functional communication channels between sales, marketing, and production regarding timing and quantity of product needs.
5. Test sufficient quantities from each production run to ensure adherence to defined product specifications and overall quality.
6. Hire only employees independent of the production process to perform testing, without exception.
7. Train employees in testing techniques and company specifications.
8. Monitor quality-related returns and complaints.
9. Communicate information about quality-related returns and complaints to quality control and production personnel for analysis.
10. Identify and eliminate underlying causes of quality-related returns and complaints to improve the production process.
11. Monitor defect rates on a continual basis.
12. Analyze defects to determine the underlying causes and to identify opportunities for process improvement.
13. Use relevant performance measures to monitor the performance of the process against scheduled production. Include measures such as the percentage of completed production orders that meet proposed quantity and quality specifications and the number and percentage of defect items produced.

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C. Production is completed on a timely basis.

Business risks

- The company will fail to produce goods in time to satisfy customer order requirements.
- Stock levels of finished goods will not be sufficient to meet ongoing customer demand.
- A backlog of uncompleted orders will lead to customer dissatisfaction regarding product availability and increased costs due to overtime.
- Computers and information technology will not be used effectively to integrate engineering and manufacturing processes.

Control practices

1. Define, organize and document each stage of production.
2. Monitor production orders at each stage of production.
3. Ensure that the production system has sufficient flexibility to allow for overtime or the use of idle production facilities.
4. Implement communication channels between engineering, production, scheduling, and sales or customer service to expedite orders behind schedule.
5. Notify production of orders that can be postponed in the event of production problems or delays.
6. Use relevant performance measures to monitor on-time performance. Include measures such as: number and percentage of production orders not completed within the scheduled time frame, number of times orders have had to be expedited, and measures of overtime or idle facilities due to production delays.
7. Establish backup policies and procedures (use of overtime or idle facilities) to handle unanticipated production problems.
8. Implement computers and information technology in the engineering and manufacturing processes to reduce lead times for product design and delivery, and to maximize performance of employees and equipment.
9. Consider various methods--such as just-in-time principles--to simplify production.

D. Scrap is properly handled and accounted for.

Business risks

- Scrap sales will not be recorded or will be reported incorrectly.
- Scrap sales will be sold at an inappropriate price or to an unacceptable credit risk.
- Scrap will be lost, stolen, destroyed, or temporarily diverted.

Control practices

1. Accumulate, safeguard, and monitor production scrap.
2. Dispose of scrap through competitive bidding, when practical.
3. Require management authorization for sales of scrap.

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E. Packaging size and type are aligned with customers' needs and wants.

Business risks

- Company products will fail to reach expected sales levels due to poor packaging.
- Customer satisfaction will be reduced if products arrive damaged due to poor packaging.

Control practices

1. Use packing materials, containers, or procedures best suited for the product and method of shipment.
2. Test the various types of packaging to ensure they protect the products at an appropriate cost.
3. Conduct market research to determine customers' packaging needs. Research techniques may include point of sale questionnaires and interviews, mailed questionnaires to key customers, and customer focus groups conducted internally or by outside market research consultants.
4. Analyze market research to gain an understanding of customer packaging requirements, and incorporate these requirements in the packaging design process.
5. Analyze packaging strategies of competitors to gain an understanding of their strengths and weaknesses.
6. Incorporate information gathered about competitors' packaging strengths and weaknesses into the packaging design process.

F. Employees and management are provided with the information needed to control the process of making products.

Business risks

- Information provided to employees and management about the process will conflict with company objectives.
- Employees will not improve the performance of the process on a timely basis.
- Plans to improve the process will be based on incorrect perceptions of process performance.

Control practices

1. Identify and understand customer expectations.
2. Identify and understand company goals in relation to improving product quality, reducing production costs, and compressing cycle time.
3. Select quantifiable and controllable measures that link the process to company goals and customer expectations, as well as stimulate continuous improvement.
4. Determine what data needs to be collected and how it is to be measured to produce relevant and reliable performance measurements.

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G. Relevant management information is provided to managers and empowered employees on a timely basis.

Business risks

- Information used to support business decisions will not be relevant.
- Users and managers will make poor decisions because the information they use is incomplete, out-of-date, or irrelevant to the decision.
- Performance measures will not be aligned with management strategy. Measures will focus on the wrong things and provide incentives for actions that are inconsistent with the strategy.
- The results of the information process will be data rich and information poor unless the available data is synthesized, summarized, and reported at the proper level and in a useful form that supports management decisions.

Control practices

1. Ensure users and managers have determined the information needed to support decision making, when it is needed, where it should be distributed, at what level, and in what form.
2. Ensure employees empowered with the responsibility to control and improve the production process understand why the selected performance measures are relevant to the needs and wants of the customer.
3. Ensure management understands the relationship of the performance measures to company objectives so they can reinforce their importance when communicating with employees and coordinating work.
4. Design information processes to calculate and report the measurements on a consistent basis in accordance with management's plan.
5. Monitor performance measures over time against desired performance levels.
6. Analyze reasons for variations between measures and desired performance levels, take corrective action, and make necessary adjustments and improvements to the process.
7. Assess the effectiveness of the performance measures as catalysts for continual process improvement, and update the measures, if appropriate.

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H. All completed production orders are accurately and completely recorded on a timely basis.

Business risks

- Completed production will not be reported as available for sale or ready for shipment.
- Inputs for preparation of accounting journal entries will be incomplete.
- Incorrect advice will be given to customers regarding product availability.

Control practices

1. Use computer system routines to generate a report of long-outstanding production order numbers.
2. Investigate and resolve long-outstanding orders promptly.
3. Require management review of the results of long-outstanding order investigations.
4. Configure the computer system to validate information about completed production orders input against the computerized production order on file.
5. Install procedures to generate an exception report of any discrepancies in production orders.
6. Investigate and resolve discrepancies in production orders.
7. Ensure either the computer or users reconcile the results of processing with predetermined control totals.
8. Use computer system routines to automatically update inventory records of products when production order completion transactions are processed.
9. Install procedures to produce detailed reports of production runs and updated inventory levels.
10. Appoint appropriate accounting personnel to reconcile reports of production runs and update inventory levels to ensure inventory updates are accurate and complete.

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I. Calculations of standard cost are complete, accurate, and properly authorized.

Business risks

- Calculated standard costs will be unrealistic. They will not provide useful measures for variance analysis.
- Information used to calculate standard costs will be inadequate or inaccurate.

Control practices

1. Identify information necessary for developing standard product costs.
2. Evaluate the information system required to provide timely information for the development of reliable standard costs. Information required may include planned number of units to be produced, budgeted labor hours and costs, and budgeted overhead and estimated material costs.
3. Maintain a cost accounting system that accurately accumulates production costs in an appropriate manner, such as by cost center or product, and that provides adequate information for controlling and pricing inventory.
4. Establish realistic standard cost assumptions.
5. Support standard cost assumptions with invoices, bills of materials, and engineering specifications.
6. Establish standard cost assumptions through the joint efforts of manufacturing, purchasing, and accounting and revise the assumptions at least annually.
7. Review standard cost assumptions for reasonableness, and ensure non-inventory costs are properly executed.
8. Require management approval of the final standard cost assumptions.
9. Organize the production process with clearly defined stages of production.
10. Estimate costs associated with each stage of production.
11. Review stages of completion periodically to ensure the process is functioning properly.
12. Develop standard costs for the various stages of production for each product based on the identified stages of production and the cost assumptions.
13. Require management review and approval of final standard costs.
14. Review the internal and external forces affecting standard cost assumptions periodically, and modify the assumptions for significant changes.
15. Compare standard costs periodically with actual production costs for material, labor, and over or under absorbed overhead, as well as investigate and resolve significant variances.
16. Investigate significant effects of inventory changes on a timely basis.
17. Reconcile labor costs charged to inventory with standard payroll costs periodically.
18. Require appropriate operating and financial management approval of any adjustments to standard costs, such as adjustments for engineering or economic reasons.
19. Document adjustments to standard costs, and update the cost and materials systems promptly.
20. Develop and maintain adequate written procedures for developing and updating standard costs.

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J. Actual production costs are accurately and completely recorded on a timely basis.

Business risks

- Information about actual production costs incurred will be inaccurate, untimely, or unavailable.
- Comparisons of actual costs with standard costs will not be valid.

Control practices

1. Use pre-numbered material and component requisition forms to record all items issued to and returned from production.
2. Investigate any missing and/or duplicate requisition forms and reports.
3. Use pre-numbered production reports and other records to track transfers within work-in-process and to finished goods.
4. Reconcile production reports for finished production and work-in-process with recorded quantities.
5. Assign production supervisors to record and report labor hours to cost accounting.
6. Ensure production supervisors periodically approve summaries of labor hours.
7. Reconcile records of labor hours with payroll records.
8. Reconcile allocated overhead with total overhead costs incurred.
9. Require management review and approval of monthly summarizing entries.
10. Review actual costs for job cost systems to ensure they are properly coded to a particular job.
11. Review codes in job cost systems to ensure that they properly reflect capitalized or expensed costs.
12. Require management review of costs to ensure period costs are properly excluded from inventory costs.
13. Develop written procedures for compiling production costs.
14. Review procedures for compiling production costs periodically to ensure that they are responsive to current circumstances and the company objectives.

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K. Production order and production cost transactions are reliably processed and reported.

Business risks

- Unauthorized changes will be made to programs, resulting in unauthorized processing results.
- Unauthorized versions of files and/or programs will be used to process transactions, resulting in unauthorized or incorrect business transactions.
- Files (transaction, reference, or master) will be lost, altered, or damaged, resulting in inefficiencies, lost assets, or incorrect processing of transactions.

Control practices

1. Require authorization of all changes to program routines.
2. Require user approval of program change test results.
3. Install computer system security controls to preclude unauthorized program changes.
4. Employ tape and/or disk management systems to ensure that appropriate versions of transaction files, master files, and programs are used in processing.
5. Install computer system controls to preclude unauthorized changes in the versions of files and programs used to process transactions.
6. Install computer system controls to protect files and programs from unauthorized use, modification, or deletion.

L. Sufficient and reliable accountability for inventory balances exists.

Business risks

- Financial statements and records will be inaccurate.
- Detailed records will not reflect the goods actually on hand.

Control practices

1. Maintain perpetual inventory records for products produced.
2. Perform periodic counts of raw materials, work-in-process, and finished goods inventories.
3. Reconcile perpetual inventory records with the general ledger.
4. Require management review of inventory analyses and approval of book-to-physical adjustments.
5. Establish procedures to control the receipt and transfer of inventory into, within, and out of the facility (including accountability).
6. Establish monthly cutoff procedures.
7. Coordinate monthly cutoff procedures with the finance function to ensure all receipts and issuances of inventory are properly recorded.
8. Establish inventory reserves for effects such as shrinkage, pricing, and obsolescence in accordance with management's policy.
9. Review reserves periodically for reasonableness and adjust accordingly.

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M. Variances are analyzed on a timely basis.

Business risks

- Variances will be computed or recorded incorrectly. Analyses of variances will not be useful.
- The impact on inventory and cost of sales will not be determined.

Control practices

1. Ensure variances are computed by product, by resource, and by stage of production. (For example, compute variances such as labor efficiency and rate variances, materials usage and price variances, and volume variances.)
2. Verify completeness of product variance analyses by comparing them to a product list or other appropriate documents.
3. Review the general ledger to ensure that variances are recorded accurately.
4. Review variances to determine whether they are production related or inventory related.
5. Involve production personnel in the variance reviews.
6. Verify variance accuracy by re-computation or other appropriate methods.

N. Performance measurements used to control and improve the process are reliable.

Business risks

- Inaccurate measurements will result in erroneous perceptions about process performance, resulting in inappropriate decisions.
- Measurements calculated with inaccurate data will drive behavior that is inconsistent with management objectives.

Control practices

1. Use the computer system to automatically calculate the process performance measures based on data captured at the transaction source. (For example, production time, inventory levels, and production delays.)
2. Assign production personnel to periodically review the performance measures to ensure they reflect process performance.
3. Use sources such as customer surveys, production personnel complaints, and a percentage of on-time deliveries to gather relevant information about the processes.
4. Communicate process information to all responsible employees on a timely basis.
5. Use cross-functional teams to identify potential process improvements.
6. Educate management and employees on the linkage of performance measures to customer satisfaction.
7. Ensure management and employees accept the measures as tools to improve process performance.
8. Link relevant performance measures to employee performance evaluations.

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Compliance with applicable laws and regulations

A. The production process complies with applicable laws and regulations.

Business risks

- The company will incur fines or other penalties; bad publicity and loss of reputation; industrial relations problems or union disputes.

Control practices

1. Require legal review of all relevant laws and regulations.
2. Consult with union or employee representatives about compliance with laws and regulations and possible future requirements.
3. Consult with industry organizations, trade unions, or regulatory bodies about compliance with laws and regulations and possible future requirements.
4. Document company policies and procedures concerning compliance with laws and regulations.
5. Distribute documentation of company policies and procedures concerning compliance with laws and regulations to employees and management involved in the production process.
6. Monitor safety violations and enforce disciplinary action on employees who violate safety procedures.
7. Conduct periodic safety tests.

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B. Product packaging complies with applicable laws and regulations.

Business risks

- The company will incur fines or other penalties; bad publicity and loss of reputation.
- Risk of products being recalled and removed from the market will increase.

Control practices

1. Require legal review of all laws and regulations relevant to product packaging.
2. Consult sales and marketing personnel and develop procedures to ensure that packaging designs comply with laws and regulations.
3. Develop a compliance checklist and require management sign-off for all new packages.
4. Consult with industry organizations and regulatory bodies about compliance with laws and regulations and possible future requirements.
5. Monitor regulatory and industry developments to ensure that the packaging procedures and checklist remain current.
6. Document company policies and procedures concerning compliance with laws and regulations.
7. Distribute documented policies and procedures to process personnel.
8. Designate a legal officer responsible for ensuring that packaging complies with laws and regulations.
9. Ensure that the designated legal officer is available to advise management about compliance with laws and regulations.