Jamaica: jobs, AI and export demand

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An adaptation of the Anthropic framework using official Jamaican employment data

Jobs, industries and export demand

Caribbean AI Association

20 October 2026
Version 2.0. Descriptive evidence, conditional economic simulations and deterministic demand stresses. Not peer reviewed.

Jamaica’s experience of AI will depend both on changes within firms and on demand for the services they sell. This study examines 32 occupations, including bank tellers, accountants, bookkeepers, lawyers, hotel staff, tour guides and musicians. It uses the official July 2026 employment baseline to examine five economic scenarios and four cases of weaker export demand. The results depend on the assumptions in each case; the study does not assign probabilities to them. [S01–S03, S08–S10, S13]

The most severe outsourcing case assumes that all contracts for the activity being modelled are withdrawn. Output and demand for work in that activity fall to zero. This tests the consequences of complete contract loss; it is not a forecast for Jamaica’s global services sector. Workers might find work elsewhere, and other businesses might expand. The calculation therefore cannot establish national unemployment or permanent job losses.

This Caribbean AI Association study adapts the task-based framework behind Anthropic’s economic scenarios to Jamaica. It combines official employment data, conditional economic scenarios and industry-specific demand stresses. The adaptation has not been reviewed or endorsed by Anthropic. [S01–S03]

Scenario	Model type	2030 GDP level gap	Unemployment	Comparison
Gradual adoption	Core economic model	+0.71%	3.40%	Matched no-AI path
Broad adoption	Core economic model	+3.61%	3.76%	Matched no-AI path
Rapid automation	Core economic model	+13.50%	8.07%	Matched no-AI path
Worker-led adoption	Core economic model	+2.56%	3.60%	Matched no-AI path
Digital services upgrade	Core economic model	+4.94%	3.81%	Matched no-AI path
Outsourcing retreat	Demand stress test	+2.06%	Not estimated	Unshocked no-AI path; combined AI and demand effect
Nearshore outsourcing collapse	Demand stress test	+0.50%	Not estimated	Unshocked no-AI path; combined AI and demand effect
Tourism demand shock	Demand stress test	+1.54%	Not estimated	Unshocked no-AI path; combined AI and demand effect
Combined export shock	Demand stress test	-0.79%	Not estimated	Unshocked no-AI path; combined AI and demand effect

Throughout the report, GDP differences refer to output levels rather than annual growth rates. Each core AI scenario is compared with a path that has the same non-AI conditions. The export-demand cases make a

different comparison: they combine broad AI adoption with lost demand and compare the result with a path that has neither AI adoption nor an export shock. Their results reflect both changes, so they cannot be read as the effect of AI alone.

Approach and core findings

The broad-adoption simulation illustrates the main policy concern: national output can increase while some workers earn less and unemployment rises. By 2030, output is 3.61% above its matched no-AI path, wages in the cognitive occupation group are 1.97% lower, and unemployment is 3.76%. These are conditional model results, not forecasts. Firms and government should assess productivity gains alongside pay, job changes and the support workers need to move into other work.

The study asks how AI capability, adoption and autonomy interact with Jamaica's workforce and the difficulty of moving between jobs. It examines output and wage differences against matched no-AI paths, factor shares and unemployment at the start of 2030.

The work combines official descriptive data with conditional simulation. It does not identify AI's causal effect on Jamaican employment. The technical report provides the reference economic framework, with adaptation and limitations documented here. [S01–S02]

Official employment and economic data

STATIN's revised Labour Force Survey for July 2026 provides the employment baseline. It records 1,419,200 employed people and a labour force of 1,468,500, including 49,300 unemployed people. The counts imply an unemployment rate of 3.357%, which rounds to the published 3.4%. Informal employment accounts for 797,400 people, or approximately 56.2% of employment. These figures are survey estimates. [S03]

The baseline comes from STATIN's current Labour Force Data Explorer, which includes July 2026. The downloadable workbook ends in July 2025 and is used only for historical comparison. The observations in this report refer to the data available when the study was prepared; STATIN may subsequently revise them. [S03–S04]

Industry	Employed July 2026	Share
Agriculture, Forestry and Fishing	182,200	12.84%
Manufacturing	87,100	6.14%
Electricity, Gas and Water Supply	10,400	0.73%
Construction	152,200	10.72%
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	268,700	18.93%
Transportation and storage	70,700	4.98%
Accommodation and Food Service Activities	125,500	8.84%
Information and Communication	12,500	0.88%
Financial and Insurance Activities	36,100	2.54%
Real Estate and Other Business Services	146,800	10.34%
Public Administration and Defence; Compulsory Social Security	73,800	5.20%
Education, Human Health and Social Work Activities	127,300	8.97%
Arts, Entertainment, Recreation and Other Services	117,100	8.25%
Combined suppressed / unallocated residual	8,800	0.62%

Industry and occupation interpretation

STATIN suppresses the counts for mining and unspecified industry in its current table. Together, the reported industry counts fall 8,800 short of total employment. That difference is retained as a combined residual covering suppressed or unallocated employment and possible rounding. It cannot be treated as a mining employment count. All industry shares use the official employment total. [S03]

Trade is Jamaica's largest reported employer. Agriculture, construction, business services, education and health, accommodation and food, and other services also employ substantial numbers of people. Industry size helps identify where changes could affect many workers, but it does not establish exposure to AI. Within a hotel, for example, reception, cooking, cleaning, maintenance and management involve quite different tasks.

Managers, professionals, technicians and clerical support workers account for 461,500 people, or 32.52% of employment. The services and sales group contains a further 333,000 people doing a wide range of work. For the central calculation, one quarter of that group is assigned to cognitive work, bringing the cognitive share to 38.38%. This allocation is an assumption, not a STATIN estimate. Sensitivity calculations vary the fraction from zero to one. Unclassified occupations remain outside the central cognitive group. [S03]

The published occupation counts sum to 100 more people than the official employment total. The study retains the source counts and treats the difference as rounding; employment shares still use the official total. The data also retain male and female observations and the available history from January 2024. Education and formal employment are not used as substitutes for evidence of AI literacy. [S03]

Occupation	Employed July 2026
Managers	112,300
Professionals	125,900
Technicians and Associate Professionals	98,400
Clerical Support Workers	124,900
Services And Sales Worker	333,000
Skilled Agricultural, Forestry and Fishery Workers	174,800
Craft and Related Trades Workers	178,900
Plant and Machine Operators and Assemblers	77,000
Elementary Occupations	187,500
Occupation not elsewhere classified	6,600
Total Employed Labour Force	1,419,200

Economic model and Jamaican calibration

The economic framework treats production as a bundle of tasks. Automation, augmentation and new tasks affect capital demand and worker movement between cognitive and other occupations. It describes a monthly economic system rather than a fitted Jamaican forecast. The adaptation uses Alan Lujan's MIT-licensed Econ-ARK implementation. [S01, Sections 2–3 and Appendix A; S14]

The simulation runs from mid-2026 to the start of 2030. Jamaican employment composition and unemployment replace the corresponding US baseline. The amount of work initially affected by AI, and the capability paths to 2030, are scaled by Jamaica's cognitive employment share relative to the US share in the original framework. Adoption starts at an assumed 5% of affected task instances and reaches 15%, 30% or 50% in the original three scenarios. These adoption paths are assumptions; they were not estimated from a Jamaican survey.

The central calculation uses a CES substitution elasticity of 0.5, capital-supply elasticity of 3, labour share of 0.6, annual job-separation fraction of 0.11, wage rigidity of 0.5 and cross-group mobility of 0.17. It applies common occupational separation hazards in place of the US relative hazards. These parameters are taken from the reference framework or set for the study, rather than estimated from Jamaican worker-flow data. The sensitivity analysis examines how changing them affects the results.

The 2023 national accounts provide context for the labour-share assumption. They record employee compensation of J$1,484,084 million and GDP of J$3,301,898 million. Removing taxes less subsidies gives gross value added, but compensation still excludes the labour component of mixed income. The resulting ratio therefore does not measure the full share of income going to labour. The model's assumed share of 0.6 should not be read as an observed Jamaican figure. [S05–S06]

Let m be the affected labour-task mass, d diffusion across its instances, a the log productivity gain, ψ the automation share, ρ new labour-task mass per unit of automated mass and σ the CES elasticity. The model's displacement term is $z = m\,d\,[1 - \rho\psi - (1 - \psi)\exp(-(1 - \sigma)a)]$. It changes labour demand inside a system where capital demand and wages also adjust. It is not a count of workers dismissed. The matching block combines search pools, vacancies and cross-group mobility, then updates employment and unemployment monthly while conserving the fixed labour force. [S01 equations; S14 implementation]

The reinstatement parameter ρ measures new task mass relative to automated task mass, rather than the number of new jobs. The original companion inventory includes 42 examples of oversight work that might arise, but these examples neither determine ρ nor establish job creation. Local evidence would be needed to estimate this parameter. [S01]

Each AI scenario has a no-AI comparison with the same non-AI mobility conditions, because mobility alone can change simulated unemployment. Output and wage differences are calculated from the paired log paths and then expressed as percentages. Additional unemployment is the difference between the final unemployment shares multiplied by the fixed labour force. It is a stock at the end of the simulation, not cumulative layoffs.

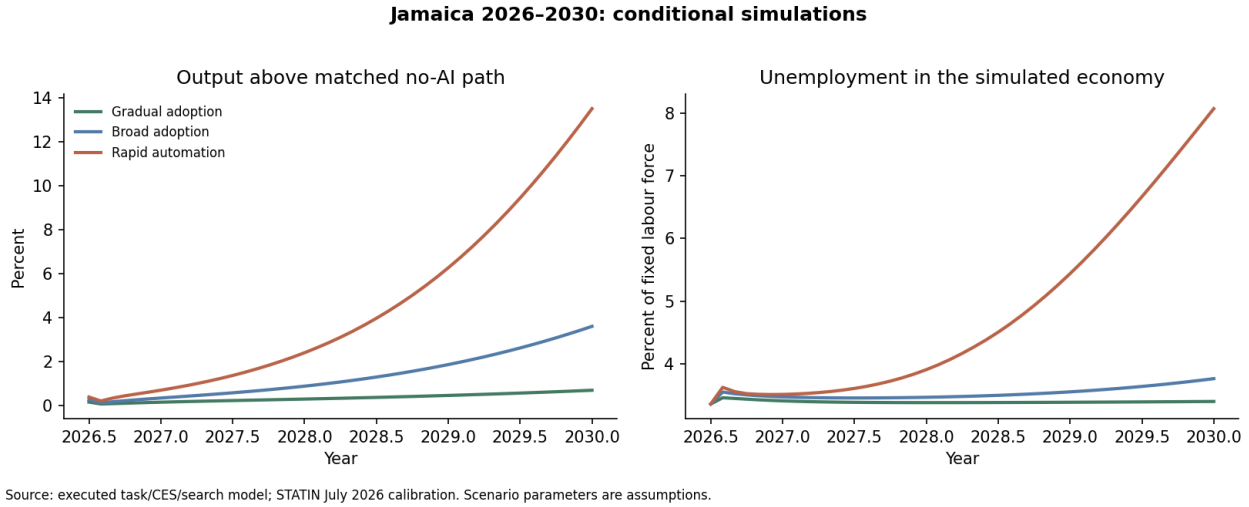
The no-AI path assumes annual labour-augmenting growth of 1% and no growth in the labour force. Results are reported as differences from that path, rather than as nominal GDP forecasts. Migration, participation and declining birth rates could alter labour supply, but those changes lie outside the present fixed-workforce model.

Input in 2030	Gradual adoption	Broad adoption	Rapid automation
Affected labour-task mass	12.31%	18.47%	30.78%
Adoption among affected instances	15%	30%	50%
Autonomous share	50%	75%	90%
New labour-task mass per automated mass	0.50	0.25	0.00
Cross-group mobility parameter	0.17	0.08	0.04

Scenario results

The scenarios vary AI capability, adoption, autonomy, new tasks and worker mobility together. Their differences therefore cannot be attributed to adoption alone. The rapid-automation case, for example, also assumes weaker movement between occupations and no reinstatement of cognitive task mass. Separate sensitivity calculations vary one factor at a time. None of the scenarios has an assigned probability.

2030 result	Gradual adoption	Broad adoption	Rapid automation
GDP gap against matched no-AI path	+0.71%	+3.61%	+13.50%
Unemployment	3.40%	3.76%	8.07%
Matched no-AI unemployment	3.36%	3.40%	3.39%
Additional unemployed stock	595	5,328	68,700
Cognitive wage gap	-0.08%	-1.97%	-16.10%
Other wage gap	+0.57%	+2.86%	+15.38%
Labour share with assumed 60% start	59.73%	58.22%	52.73%



Source: executed task/CES/search model; STATIN July 2026 calibration. Scenario parameters are assumptions.

Figure 1. Executed conditional simulations. Output gaps use matched no-AI paths. Scenario settings are assumptions; no forecast probabilities are assigned.

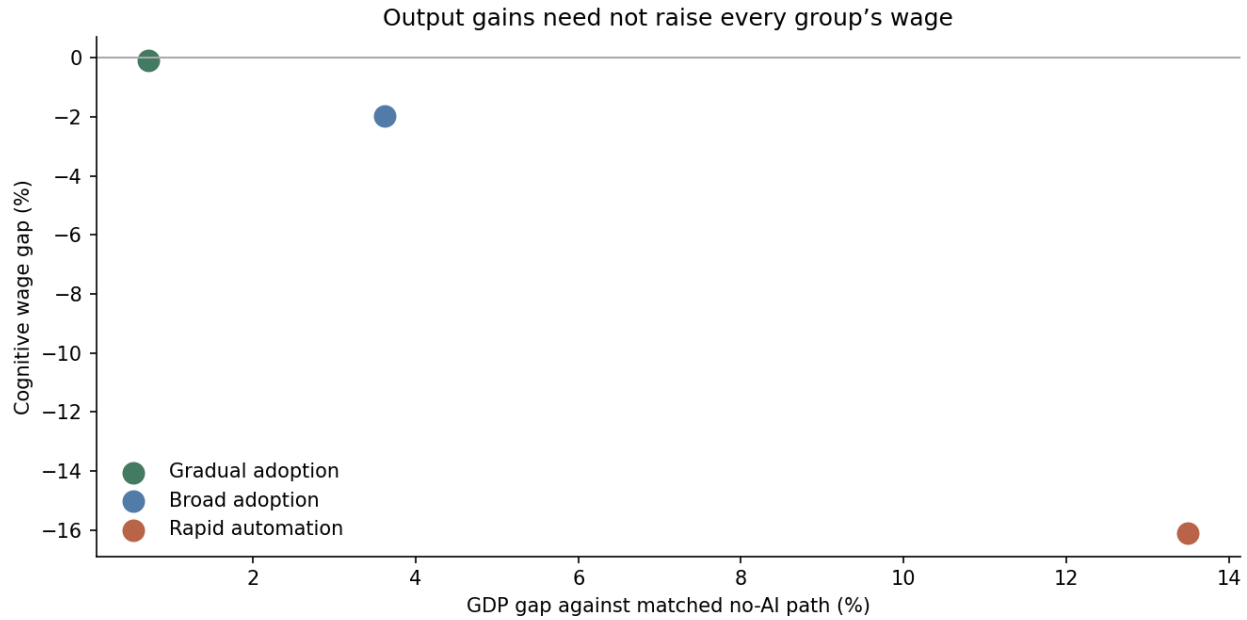
What the results imply

Under gradual adoption, output is 0.71% above the matched no-AI path and approximately 595 more people are unemployed at the end of the simulation. Cognitive-group wages are slightly lower, while wages in the other group rise modestly. The small differences should be read in light of the uncertainty over task definitions and adoption. Reporting results to two decimal places records the calculation; it does not imply that outcomes can be forecast that precisely.

Broad adoption produces 3.61% more output, with unemployment at 3.76% compared with 3.40% in the matched no-AI case. This amounts to about 5,328 additional unemployed people. Cognitive-group wages are 1.97% lower and other-group wages 2.86% higher than their respective comparisons. The economy produces more overall, but the gains are unevenly distributed.

Rapid automation produces a 13.50% output gain, but unemployment reaches 8.07%, compared with 3.39% under matched conditions without AI. The difference is about 68,700 unemployed people, and cognitive-group wages are 16.10% lower. These results follow from deliberately strong assumptions about automation and worker adjustment. They are not a prediction that 68,700 Jamaicans will lose their jobs to AI, and the study assigns no likelihood to this case.

Policy should address how gains are distributed and how workers move into other jobs. Helping someone use AI in an existing role is different from helping them enter another occupation; both may be needed. GDP alone is an incomplete measure of the public benefit. The model does not estimate household welfare, fiscal redistribution, payments for imported AI services, foreign ownership or environmental costs.



Source: executed conditional model. Wages are relative indices; Jamaican wage levels were not estimated.

Figure 2. Modelled output gains and cognitive wage gaps. Wages are relative indices, not forecasts of Jamaican wage levels.

Tasks and industry workload analysis

The original version-1 task screen contains 475 O*NET statements for 21 representative occupations, covering agriculture, manufacturing, utilities, construction, retail, freight, trucking, hospitality, software, accounting, insurance claims, customer service, data entry, public administration, teaching, nursing, design and mining. These are US descriptions used to structure local assessment. Their detailed US codes are not a verified one-to-one crosswalk to Jamaican occupations. No Jamaican headcounts are assigned to them. [S08, S10]

A transparent rule tags 135 statements as human-led delivery, 318 as augmentation candidates and 22 as automation candidates. These are counts in a screening inventory, not shares of Jamaican working time. Physical delivery, care, teaching and supervision cues take priority. Routine records and transaction cues identify automation candidates. Remaining statements default to augmentation review. The full rule, reasons and task IDs are supplied, and every tag remains provisional.

For a nurse, direct care and drawing blood remain human-led activities within this scope, while drafting records and planning can be assessed for assistance. Qualified professionals retain clinical judgement and approval. Bookkeeping and data entry provide candidate structured-record workflows, but exceptions and reconciliation remain necessary. Customer service requires separate treatment of routine support and complex customer judgement. These are assessment hypotheses, not validations for a Jamaican employer. [S08–S09; author assessment]

The separate occupation and industry tables do not show which occupations are employed in each industry. The study therefore cannot treat all business services as BPO, or all education-and-health workers as teachers and nurses. Estimating exposed workers by industry would require detailed joint employment counts and measurements of time spent on tasks.

The editable industry calculator answers a narrower operational question. Gross capacity equals workers × adoption × [automatable workload share + augmentable workload share × (1 − 1/speedup)]. Realised capacity multiplies that by a realisation factor. The workload shares, speedups and realisation factors are author-set planning assumptions. They are not estimated national task shares and do not feed the macro model.

Capacity measures working time in full-time-equivalent units. Employers could use time saved to serve more customers, reduce queues or overtime, improve quality, expand services or cover vacancies. Some of the saving may be absorbed by checking results, correcting errors and integrating systems. Staffing decisions should be based on measured task times and service quality, rather than these illustrative inputs.

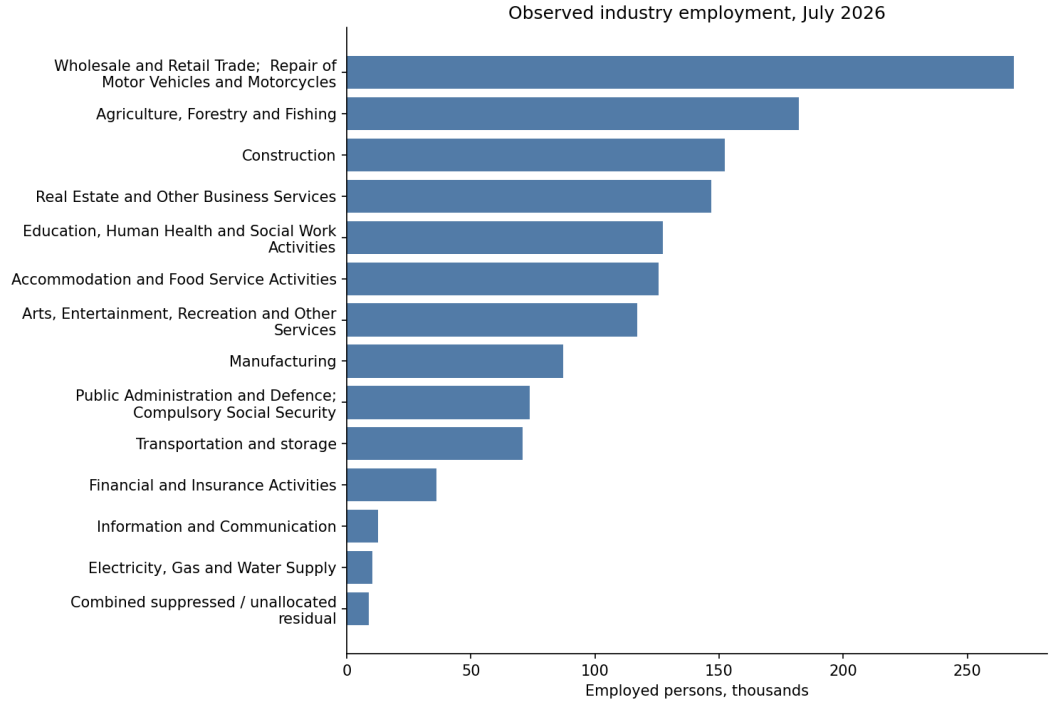


Figure 3. STATIN July 2026 observed industry employment. A combined residual retains suppressed categories and rounding.

Sensitivity to the assumptions

The sensitivity calculations vary one assumption at a time around the broad-adoption case. The resulting ranges show how the chosen inputs affect outcomes; they are not statistical intervals or probability estimates. Changes to several assumptions at once are examined separately below.

Driver	Test values	GDP gap range	Unemployment range
Service/sales cognitive fraction	0, 0.25, 0.5, 1	3.04% to 5.41%	3.70% to 3.88%
Capital elasticity	1, 3, 6	2.83% to 3.92%	3.74% to 3.77%
Labour share	0.5, 0.6, 0.7	3.46% to 3.72%	3.75% to 3.77%
Wage rigidity	0.25, 0.5, 0.9	3.26% to 3.81%	3.55% to 4.13%
Adoption in 2030	0.15, 0.3, 0.5	1.91% to 5.82%	3.46% to 4.30%
Cross-group mobility	0.04, 0.08, 0.17	3.43% to 3.75%	3.58% to 3.96%
Annual separation fraction	0.06, 0.11, 0.18	3.57% to 3.73%	3.61% to 3.84%

Demand, worker mobility and external conditions

Changing the service/sales cognitive fraction moves the broad-case GDP gap from 3.04% to 5.41%. Changing 2030 adoption from 15% to 50% moves it from 1.91% to 5.82%, while unemployment ranges from 3.46% to 4.30%. This makes the adoption measurement and occupational mapping priorities for further work. A single central percentage would conceal that dependence.

Increasing the cross-group mobility parameter from 0.04 to 0.17 reduces broad-case unemployment from 3.96% to 3.58%. The parameter is not an observed re-employment duration or training completion rate. The result supports measuring actual placement and occupational movement. Slow wage adjustment also increases

transition unemployment in the model. Neither result proves that a specific training programme changes those parameters.

Global digital services face an additional demand channel. The ministry reports more than 50,000 workers in the sector; its expectation that AI will reshape work is a policy position, not a causal employment estimate. Foreign clients can expand purchases after costs fall, adopt AI themselves, move suppliers or cut contracts. [S13]

The BPO stress table therefore uses an employment index rather than a national job-loss count. With an assumed productivity multiplier of 1.3, the index is 100 × 1.3^(demand elasticity − 1) × (1 − external contract loss). Demand elasticities of 0.5, 1 and 1.5 and contract losses of 0%, 10% and 25% are tested. Below-unit elasticity can reduce labour demand even when output per worker rises. Above-unit elasticity can support expansion. The exercise assumes full cost pass-through, constant hours and no wage or capital feedback. It is separate from national unemployment and cannot be added to it.

A second table applies hypothetical output-level haircuts of 2% and 5% multiplicatively to each AI outcome. It shows how an adverse external shock can offset technology gains. It does not estimate hurricane damage, tourism decline or disaster probabilities. The IMF's post-Melissa release establishes the relevance of recovery and external financing, but its fiscal-year projections are not substituted for this model's calendar-time comparison. [S12]

Foreign ownership matters for distribution. GDP measures domestic production; household and national income also depend on taxes, remittances, wages and profit flows. Imported AI services can raise output while transferring part of the return abroad. This model treats capital as one good and lacks a balance-of-payments block. Capital-income growth is therefore not described as income retained by Jamaican households.

Jamaica's publicly available input-output table dates from 2007. It provides historical context, but changes in production, trade and industry structure limit its use for current sector multipliers. Estimating present-day effects across industries would require updated supply-use, value-added and trade accounts. [S05, S07]

Recommendations and delivery plan

Begin with workplace trials before extending adoption programmes. Participating employers should include smaller and informal firms as well as businesses in administration, finance, insurance, global services and retail. Measure task times, errors, rework, service quality, customer outcomes and checking costs before and after adoption. Randomised rollouts or credible comparison groups would help distinguish AI's contribution from other changes. Time saved counts as a productivity gain only if the work still meets the required standard.

Seek detailed employment counts linking occupation and industry. At least two-digit occupation and JIC industry codes would be useful, with breakdowns by sex, age, education, parish and formality where sample sizes permit. The request should include standard errors, suppression rules, main-job definitions and notes on comparability. Access would remain subject to STATIN's conditions.

Worker support should begin alongside adoption, before staffing decisions are made. Training needs to connect transferable skills with actual vacancies. Proposed follow-up at three and six months would measure placement, earnings, retention and changes of occupation. Those intervals are programme design choices; course completion by itself is insufficient evidence that workers have found suitable work.

Monitor outsourcing contracts as well as productivity. Non-confidential industry reporting could cover renewals, work types, client locations, seat utilisation, output per worker and client AI requirements. Training for complex customer service, checking, workflow management and analysis should be judged by paid

employment and contract retention. These are possible routes to retaining business, rather than guarantees of demand. [S13, S18–S19]

Smaller firms may need reliable connectivity, usable records, affordable access and training linked to their own business processes. Shared assistance with implementation could help address these needs. The World Bank diagnostic identifies infrastructure, skills, firm maturity and trust as relevant conditions. Broadband access alone does not establish AI literacy, and the study does not assign a national readiness score. [S11]

Public agencies should retain clear responsibility for decisions as they introduce AI. Documentation, scheduling, retrieval and administrative assistance offer possible starting points. Before delegating further work, agencies need evidence on accuracy, exception handling, monitoring and who approves the result. Clinical, benefits, enforcement and credit decisions require assessment within their own fields; an aggregate output gain cannot establish that a particular application is suitable.

Period	Proposed work	Accountable function	Evidence
First 30 days	Confirm sources and requests; choose pilots; record baseline tasks	Research lead and employer partners	Definitions, source register, time and quality baselines
Days 31 to 60	Run controlled workflows and assess worker options	Operations leaders and worker representatives	Error logs, comparable outcomes, transition plans
Days 61 to 90	Re-estimate weights and adoption; update scenarios	Research lead and external economic reviewer	Reproducible update and held-out pilot outcomes
Quarterly thereafter	Review earnings contracts and movement between occupations	Policy and industry working group	Current observations, placement and retention

Assumptions and limitations

Several inputs that matter for Jamaica remain unmeasured: employment by both occupation and industry, time spent on tasks, AI adoption and movement between jobs. The model also uses broad occupation groups and a fixed labour force. It omits firm entry, selective migration, ageing, participation, wage bargaining, movement between formal and informal work, remittances, contract location, foreign ownership, fiscal redistribution and physical recovery. The demand stresses examine only part of this wider economic setting.

The task categories have not been assessed through a Jamaican rating study. Since the screening rule assigns otherwise unclassified tasks to augmentation, its counts cannot serve as a validated measure of occupational exposure. Expert assessment and local time-use data would be needed. The ILO framework offers a further basis for analysis once detailed Jamaican occupation codes can be mapped reliably. This study does not apply global exposure percentages to Jamaican employment. [S09–S10]

These scenarios are conditional simulations, not forecasts or causal estimates of AI’s effect on Jamaica. Local task times, adoption and worker transitions have not been measured for this study. Scenario ranges do not represent statistical confidence intervals.

Programme timing is a recommendation. The available evidence does not support a national programme cost, fiscal revenue estimate or return-on-investment claim. AI assisted research, code and drafting; the Caribbean AI Association retains responsibility for the publication.

Further scenarios and combined uncertainty

The worker-led scenario assumes 35% adoption of affected task instances, 45% autonomy, a new-task parameter of 0.65 and cross-group mobility of 0.17. The digital-services-upgrade scenario assumes 45% adoption, 65% autonomy, a new-task parameter of 0.45 and mobility of 0.17. Both use the broad case's affected task mass. Their productivity paths are specified in the model. These cases explore combinations of assumptions; they do not estimate the effects of particular training or industrial policies. The new-task parameter measures task mass, not jobs.

Core case	GDP level gap	Unemployment	Cognitive wage gap	Other wage gap
Gradual adoption	+0.71%	3.40%	-0.08%	+0.57%
Broad adoption	+3.61%	3.76%	-1.97%	+2.86%
Rapid automation	+13.50%	8.07%	-16.10%	+15.38%
Worker-led adoption	+2.56%	3.60%	+0.88%	+2.91%
Digital services upgrade	+4.94%	3.81%	+0.54%	+4.70%

The joint sensitivity exercise draws 160 Latin-hypercube configurations with a fixed seed of 20261020. The ranges are service/sales cognitive fraction 0–1, adoption 15–50%, mobility 0.04–0.17, wage rigidity 0.25–0.90, capital-supply elasticity 1–6, initial labour share 0.50–0.70 and annual separation fraction 0.06–0.18. Each draw receives a matched no-AI run. The capability mass rescales with the alternative cognitive allocation. The 1% illustrative baseline labour-augmenting trend remains consistent with the chosen labour share. These choices cover simultaneous assumption changes without interpreting uniform sampling as evidence about their likelihood.

Across the broad-case combinations examined, GDP differences at the end of the simulation range from 1.72% to 9.60%, and unemployment from 3.38% to 5.16%. These ranges describe the settings tested, rather than confidence intervals or bounds on every plausible Jamaican outcome. Different assumptions about capability, autonomy and new tasks could produce results outside them.

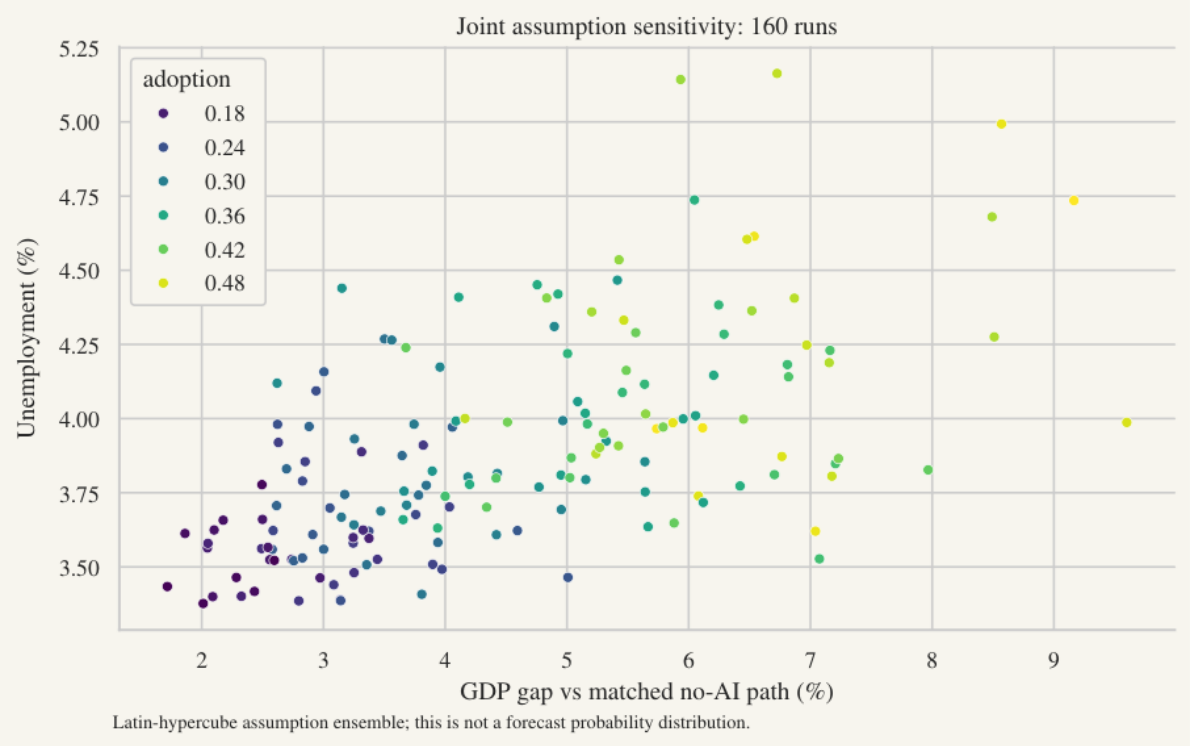


Figure 4. Output and unemployment under different combinations of assumptions. Each point is a model result, not an observed economy or a probability-weighted forecast.

Outsourcing, nearshoring and tourism demand

Jamaican service providers could become more productive and still lose contracts if overseas clients automate internally, buy less or change suppliers. This loss of demand is separate from the time saved on tasks within Jamaica. The ministry's March 2026 account reports more than 50,000 people working in global digital services and describes a shift towards more complex services. That policy assessment supports examining possible changes in demand; it does not guarantee that the sector will expand. [S13]

The sector demand calculation defines P as a labour-productivity multiplier, c as the fraction of external contracts lost, e as the fraction of the role's demand exposed to that shock, and η as the demand elasticity under full productivity-related cost pass-through. Output demand is indexed by $Q = 100(1 - ec)P^{\eta}$. Labour demand is indexed by $N = Q/P = 100(1 - ec)P^{(\eta-1)}$. Both indices start at 100 in the unchanged-work and unchanged-demand comparison. Prices, hours, quality and wage determination are simplified. When η is below one, productivity can reduce the labour required even if output rises. When c equals one and e equals one, both indices are exactly zero.

The demand index does not count dismissals. It omits recruitment, changes in hours, vacancies, worker movement, firm entry, wage responses and feedback from foreign demand. Complete contract loss applies only to the activity explicitly being modelled. It does not mean that everyone working in business services, ICT, accounting or law depends on those contracts. The 146,800 people employed in the broad business-services industry are not treated as a BPO workforce.

Case	Outsourced-service contract loss	Tourism-demand loss	Recorded-music demand loss
Outsourcing retreat	50%	0%	0%
Nearshore outsourcing collapse	100%	0%	0%
Tourism demand shock	0%	25%	0%
Combined export shock	75%	25%	30%

For scale alone, taking 50,000 as a conservative anchor to the ministry's "more than 50,000" statement gives 25,000 contract-supported positions at a 50% demand reduction under fixed productivity, and zero in the complete-withdrawal boundary. These are arithmetic illustrations, not current headcounts, forecast layoffs or additions to national unemployment. The index results are preferred because the exact sector count, role composition and overlapping AI displacement are not established. [S13]

A separate national output diagnostic applies $Y_{stress}/Y_{noAI} = (Y_{core}/Y_{noAI})[1 - b\,c_B - t\,c_T]$, where b = 0.03 and t = 0.08 are assumed outsourced-service and direct tourism value-added weights. They are not measured Jamaican GDP shares. The central net-demand multiplier is one. Contract and tourism losses rise linearly from zero in July 2026 to their stated January 2030 values. This is a deterministic output wedge, not a calibrated multi-sector general-equilibrium model or a current input-output multiplier. Imported-input leakage, substitution and re-employment output are not solved. The demand cases do not estimate national unemployment, wages or labour share.

The assumed output weights are 3% for outsourced services and 8% for direct tourism. Current sector value-added data would be needed to estimate them. The BOJ balance-of-payments portal does not, on the evidence obtained for this study, provide a current BPO-only value-added series. Gross export receipts would need to be converted to domestic value added, and the 2007 input-output table is too old to supply current multipliers. [S05, S07, S21]

The combined case assumes a 75% contraction in outsourced-service demand and a 25% contraction in tourism demand. Its recorded-music component affects only the musician example; no music weight is added to national GDP. Hotel and restaurant employment provides useful context but does not cover every job

supported by tourism. Visitor losses could also affect transport, food suppliers and entertainment, although the available data do not allow those links to be quantified here.

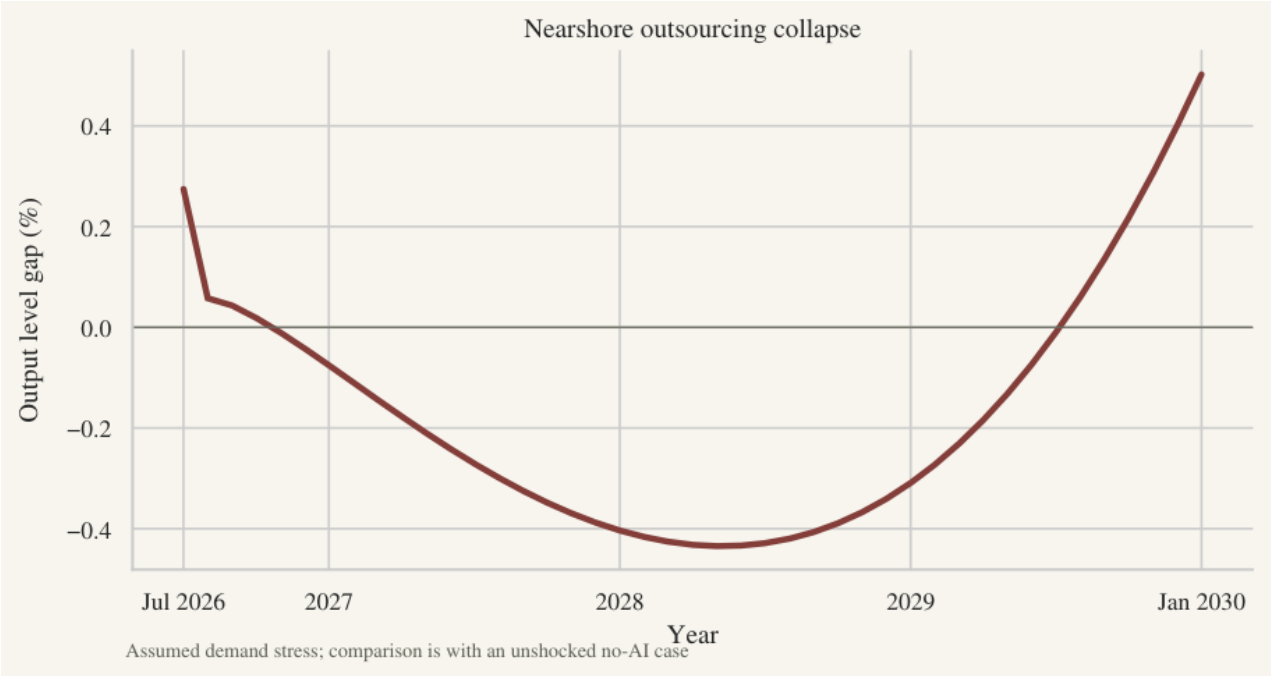


Figure 5. Complete nearshore-outsourcing contraction combined with the broad AI core. The curve uses assumed value-added weights and an unshocked no-AI comparison. It is not an estimate of national unemployment.

A further 108 stress calculations vary the outsourced-service value-added weight from 1.5% to 5%, the tourism weight from 5% to 12%, and a net-demand multiplier from 0.5 to 1.5. These deliberately broad assumptions show how strongly the diagnostic depends on missing trade information. The multiplier is a sensitivity input, not an estimated Keynesian or input-output multiplier. The resulting ranges are not probability intervals.

Demand stress	GDP-gap range over assumed weights
Outsourcing retreat	-0.27% to +3.22%
Nearshore outsourcing collapse	-4.16% to +2.83%
Tourism demand shock	-1.05% to +2.96%
Combined export shock	-6.88% to +2.38%

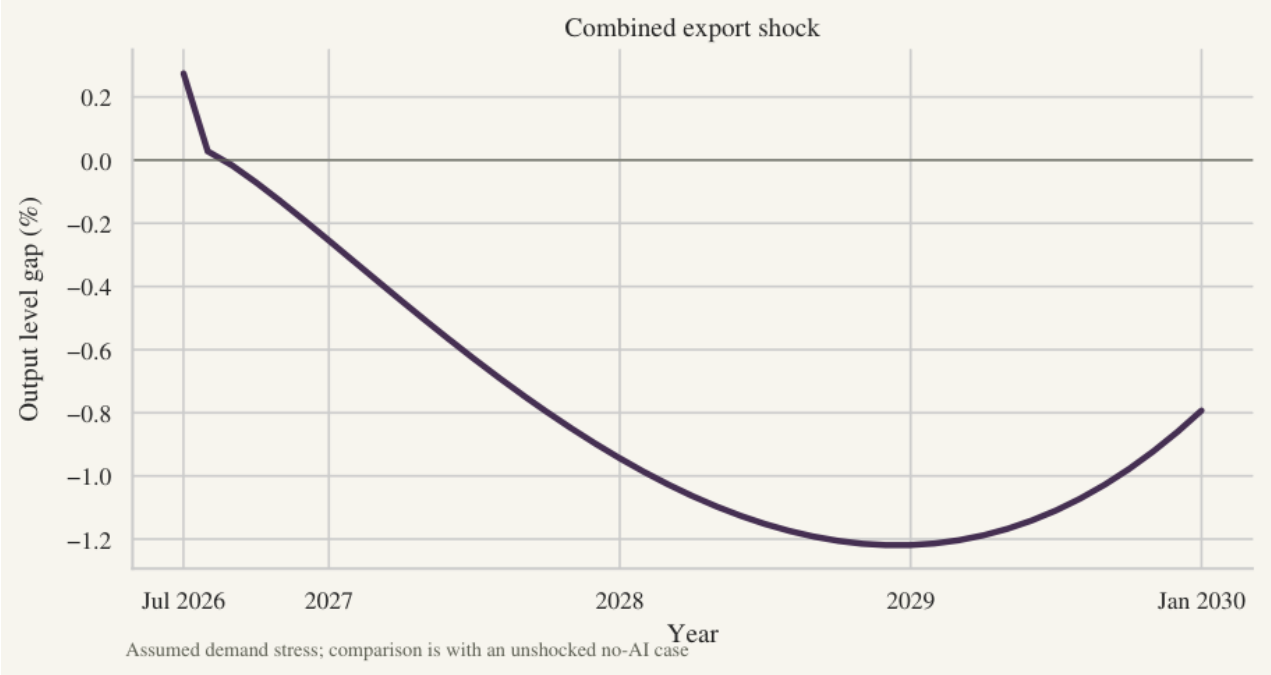


Figure 6. Combined export-demand stress. Output can fall below the unshocked counterfactual even when the core AI model raises productive capacity.

Finance, professional services and other occupations

The expanded occupation catalogue contains 711 O*NET task records covering 32 representative occupations. The US Department of Labor database supplies the occupation codes and task descriptions, but not Jamaican employment counts, local task times, AI capability ratings or adoption rates. Linking a role to an industry shows where the work might occur; it does not estimate employment in that role and industry. The earlier screen of 475 records is kept separate. [S08, S10]

For each role, the planning model assumes an automation-eligible time fraction A, an augmentation-eligible fraction G, adoption d and task speedup s. Gross time capacity per worker is d[A + G(1 – 1/s)]. Realised capacity is max[0, 0.70 × gross – 0.05d]. The 70% realisation factor and oversight allowance are assumptions. The resulting productivity index is P = 1/(1 – realised capacity). These calculations describe possible working time under specified workflow conditions. Capacity is expressed per 100 workers and must not be called positions eliminated.

The task animation uses provisional categories that give priority to physical work, care, performance and professional interaction. These categories are not validated AI capability ratings. Time shares are assigned separately for the planning calculation; counting the tasks displayed does not determine them. CAIA’s examples of new oversight work illustrate possible responsibilities without establishing that new jobs will be created.

Role	O*NET code	Automation time assumption	Augmentation time assumption	Demand elasticity assumption	Jamaican headcount
Farm manager	11-9013.00	5%	20%	0.8	Not available
Crop worker	45-2092.00	3%	10%	0.8	Not available
Production assembler	51-2092.00	8%	18%	0.8	Not available
Production manager	11-3051.00	15%	40%	1.0	Not available
Electrician	47-2111.00	5%	20%	0.8	Not available
Meter reader	43-5041.00	15%	25%	0.8	Not available
Civil engineer	17-2051.00	15%	45%	1.1	Not available
Carpenter	47-2031.00	3%	12%	0.8	Not available

Role	O*NET code	Automation time assumption	Augmentation time assumption	Demand elasticity assumption	Jamaican headcount
Retail cashier	41-2011.00	30%	25%	0.8	Not available
Retail salesperson	41-2031.00	15%	30%	1.0	Not available
Truck driver	53-3032.00	5%	20%	0.8	Not available
Freight agent	43-5011.00	25%	40%	1.0	Not available
Hotel receptionist	43-4081.00	25%	35%	1.1	Not available
Chef	35-1011.00	5%	20%	0.9	Not available
Tour guide	39-7011.00	10%	30%	1.1	Not available
Software developer	15-1252.00	25%	50%	1.2	Not available
IT support specialist	15-1232.00	25%	40%	1.0	Not available
Bank teller	43-3071.00	25%	30%	0.7	Not available
Loan officer	13-2072.00	20%	40%	0.9	Not available
Insurance claims adjuster	13-1031.00	20%	40%	0.9	Not available
Insurance underwriter	13-2053.00	25%	45%	0.9	Not available
Accountant and auditor	13-2011.00	25%	45%	0.9	Not available
Bookkeeper	43-3031.00	40%	35%	0.7	Not available
Lawyer	23-1011.00	15%	50%	0.9	Not available
Outsourced customer service agent	43-4051.00	35%	40%	0.8	Not available
Data entry clerk	43-9021.00	50%	25%	0.6	Not available
Public service operations manager	11-1021.00	15%	40%	1.0	Not available
Office clerk	43-9061.00	35%	40%	0.8	Not available
Primary school teacher	25-2021.00	10%	35%	1.0	Not available
Registered nurse	29-1141.00	10%	30%	1.0	Not available
Musician and singer	27-2042.00	10%	35%	1.2	Not available
Graphic designer	27-1024.00	30%	45%	0.8	Not available

Bank tellers and branch services

AI could assist with transaction records, reconciliations and routine service messages. Cash handling, identity discrepancies and support for customers who need extra help would still require staff.

Track transaction errors, unresolved exceptions and access to branch services. Distinguish generative AI’s effects from those of ATMs and other digital channels.

In the broad-adoption calculation, the time saved is equivalent to 6.0 full-time workloads per 100 workers. Demand for work has an index of 98.2, where 100 represents unchanged work and demand. These values use the assumptions described above. Task source: O*NET 43-3071.00.

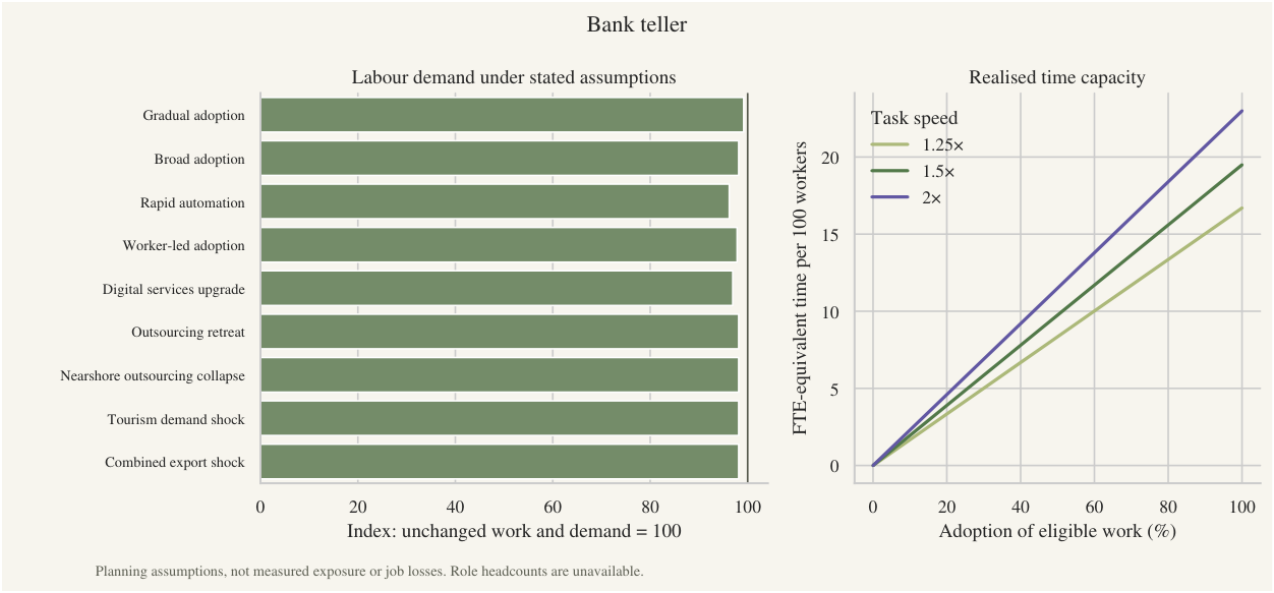


Figure. Bank teller: scenario labour-demand indices and time-capacity sensitivity. The dashed 100 line is an index reference, not a headcount.

Accountants and auditors

Invoice processing and initial reconciliation could take less time. Accountants would still need reliable evidence, effective controls and professional judgement when explaining or approving the accounts.

Measure completion time together with errors and audit quality. Retain qualified sign-off and protect client records.

In the broad-adoption calculation, the time saved is equivalent to 7.2 full-time workloads per 100 workers. Demand for work has an index of 99.3, where 100 represents unchanged work and demand. These values use the assumptions described above. Task source: O*NET 13-2011.00.

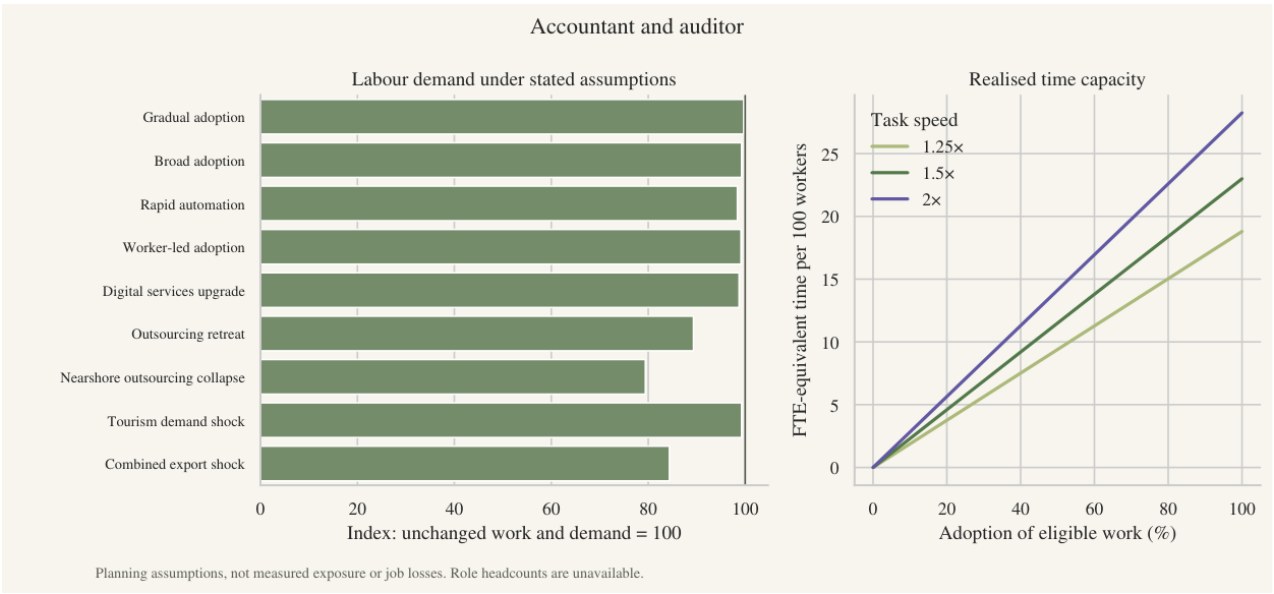


Figure. Accountant and auditor: scenario labour-demand indices and time-capacity sensitivity. The dashed 100 line is an index reference, not a headcount.

Bookkeepers and routine finance

Routine posting and account preparation could be candidates for automation where the records are reliable. Unusual entries and reconciliation differences would still need investigation.

Assess reconciliation accuracy, fraud controls and the time needed to correct entries. Include those costs when estimating the saving.

In the broad-adoption calculation, the time saved is equivalent to 9.6 full-time workloads per 100 workers. Demand for work has an index of 97.0, where 100 represents unchanged work and demand. These values use the assumptions described above. Task source: O*NET 43-3031.00.

Lawyers and legal services

Research, document review and drafting could change how lawyers spend billable time. Client advice, advocacy and responsibility for the work would remain with the lawyer.

Check every cited authority against primary law and protect privileged material. Measure effects on fixed-fee work as well as billable hours.

In the broad-adoption calculation, the time saved is equivalent to 5.4 full-time workloads per 100 workers. Demand for work has an index of 99.4, where 100 represents unchanged work and demand. These values use the assumptions described above. Task source: O*NET 23-1011.00.

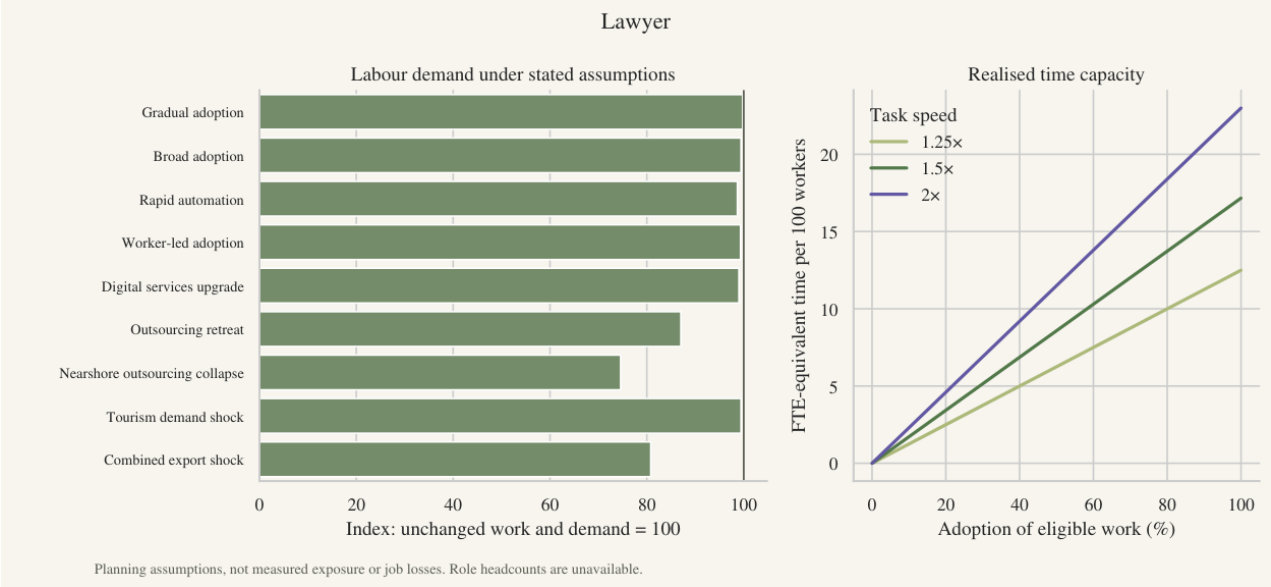


Figure. Lawyer: scenario labour-demand indices and time-capacity sensitivity. The dashed 100 line is an index reference, not a headcount.

Outsourced service agents

AI assistance could help agents respond to customers, but overseas clients might also automate the work themselves or move contracts. Faster service in Jamaica would not by itself secure demand.

Monitor contract renewals, client concentration and paid work alongside service quality. Evaluate training by whether staff retain work or move into suitable roles.

In the broad-adoption calculation, the time saved is equivalent to 8.9 full-time workloads per 100 workers. Demand for work has an index of 98.2, where 100 represents unchanged work and demand. These values use the assumptions described above. Task source: O*NET 43-4051.00.

Tourism and hotel work

Reservations, translations and guest messages could take less time to handle. Staff would still need to resolve complaints and assist guests in person. A fall in visitor demand could outweigh those time savings.

Measure booking conversion, guest outcomes and staffing hours alongside visitor demand. The accommodation-and-food employment total does not include every job supported by tourism.

In the broad-adoption calculation, the time saved is equivalent to 6.4 full-time workloads per 100 workers. Demand for work has an index of 100.7, where 100 represents unchanged work and demand. These values use the assumptions described above. Task source: O*NET 43-4081.00.

Musicians and recorded music

Editing and promotion could become cheaper, while synthetic recordings could compete for licensing and streaming income. Live performance and recorded music may therefore face different changes in demand.

Track live fees, recording income, publishing, licensing and royalties separately. Document consent for voice use and rights ownership; global revenue projections are not Jamaican estimates.

In the broad-adoption calculation, the time saved is equivalent to 3.3 full-time workloads per 100 workers. Demand for work has an index of 100.7, where 100 represents unchanged work and demand. These values use the assumptions described above. Task source: O*NET 27-2042.00.

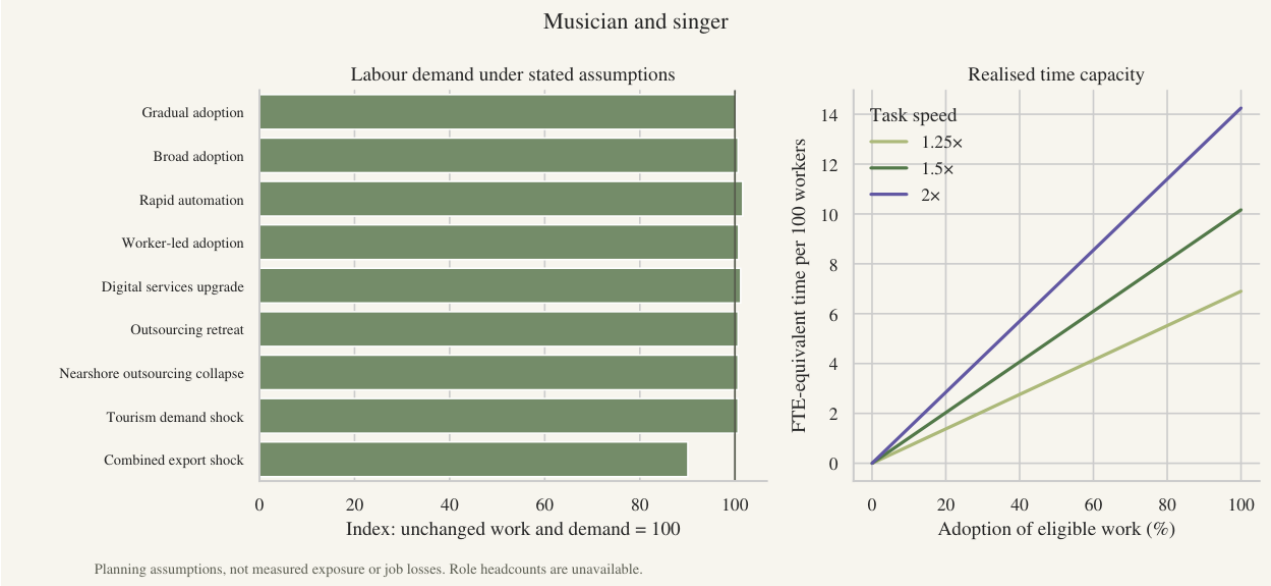


Figure. Musician and singer: scenario labour-demand indices and time-capacity sensitivity. The dashed 100 line is an index reference, not a headcount.

Banking and insurance bring together transaction processing, customer service, credit decisions and assurance. These activities should be assessed separately. Generative AI also overlaps with earlier changes in digital payments and rules-based automation, so a fall in teller employment cannot automatically be attributed to it. For lending and underwriting, evaluation needs to cover decision quality, bias, escalation and portfolio outcomes. Contract losses might also affect credit risk and insurance demand, but those balance-sheet effects are outside this model.

Accountants and bookkeepers might use faster processing to serve more clients, while competition could put routine fees under pressure. The planning calculation represents this response through demand elasticity. Professional responsibilities remain relevant, including audit liability, reliable source documents, privacy, fraud controls and independence. The role index does not estimate fees or the number of licensed accountants.

In legal services, faster document review and drafting could change how billable time is spent. Advocacy, negotiation, client advice and professional responsibility still require attention. Checking fabricated citations or errors about jurisdiction may absorb some of the time saved. A local study should measure fixed-fee margins, billable hours, turnaround, errors and client outcomes; the present model estimates none of those effects causally.

Musicians: income, rights and competition

Musicians need an income-channel analysis as well as a task analysis. Live performance, recording fees, master rights, publishing, licensing and platform royalties have different customers and contractual arrangements. AI can lower the cost of editing and promotion while synthetic recordings compete in some commercial markets. Voice imitation, consent and attribution can affect bargaining and enforcement costs. The physical act of performance is not equivalent to the market for recorded music. [S08; O*NET 27-2042.00; S20]

UNESCO's 2026 release discusses projected global pressure on music creators' revenues and platform concentration. This study uses that as motivation for testing a revenue channel. It does not apply the global percentage to Jamaican musicians. There is no representative Jamaican income-mix dataset in the analysis, and no national musician headcount is inferred from the broad arts-and-other-services category. [S20]

In the combined stress, the assumed recorded-music demand loss is 30% and the exposed share of the illustrative musician's demand is 35%. The direct weighted demand shock is therefore 10.5% before the productivity and price-response assumptions. The 35% refers to the assumed share exposed to that specific music-market channel; it is not a measured export share or a royalty estimate. Varying the affected share from zero to one produces a direct demand shock from zero to 30% under the same contraction. Live fees, licensing and ownership can respond differently.

A useful next step would be a confidential panel of musicians who consent to reporting live and recorded income, rights ownership, foreign receipts, costs and working time separately. Policy options to assess include rights documentation, consent for voice use, licensing assistance, collective bargaining and direct relationships with audiences. Their costs and effects would need evaluation. This study does not estimate a return on these measures or determine the legal position of a particular work.

Industry coverage and implementation priorities

Agriculture, manufacturing, utilities, construction, trade, transport, hospitality, ICT, finance, business services, public administration, education and health, and arts and other services are covered through observed industry totals and representative role examples. Mining and unspecified industry remain in the combined suppressed residual. Employment scale and output contribution are different: a capital-intensive industry can contribute substantial value added while employing fewer people. The report does not rank GDP contributions using employment shares.

Sector or work group	Immediate study focus	Outcome to measure
Banking and insurance	Separate routine operations from advice and consequential decisions	Errors, access, approvals, fraud outcomes, service time and wages
Tourism and hospitality	Combine guest-service workflows with bookings and visitor demand	Conversion, guest satisfaction, working hours, demand and retained earnings
Global services and nearshoring	Observe client renewals and upgrading alongside automation	Contract value, concentration, seat utilisation, service quality and paid placement
Accounting and law	Track how routine fees and professional judgement change	Verified accuracy, completion time, fee structure, margins and client outcomes
Music and creative work	Separate live income from recordings, royalties and licensing	Income by channel, ownership, consent, attribution and platform terms
Agriculture, construction and manufacturing	Assess planning and records without assuming physical automation	Quality-adjusted output, downtime, input costs and safety
Trade, transport and utilities	Assess transactions, dispatch and administrative work	Throughput, exceptions, service access, hours and quality
Public services, education and health	Keep accountable professional decisions with validated workflows	Service quality, errors, learning or care outcomes, privacy and workload

A first 90-day research programme could recruit employers and workers, measure task times and agree quality standards before introducing AI assistance. A staggered or randomised rollout would be useful where practical. Follow-up should track occupation changes, pay and retention, rather than stop at training completion. For exporters, it should also record contract renewals and client location. Analysis would need to account for tourism recovery, demand, migration, hours and prior digital investment before attributing changes to AI. This is a proposed programme, not a completed experiment or an agreed partnership.

Sources

ID	Source	Use and access
S01	Korinek Jones Sacher Cotter and McCrory Economic Scenarios for Transformative AI (2026)	Working Paper 2026-02; Sections 2–3 and Appendix A; task-based economic framework *Full PDF read*
S02	Anthropic Scenarios for our Economic Future (2026)	Public task illustration and scenario explorer *Web page read*
S03	STATIN Labour Force Data Explorer (2026)	Main Indicators; EMP by Industry; EMP by Occupation; EMP by Formality; INFOR_FOR EMP by Industry; EMP by ISCED. July 2026, history to January 2024 *Public tables extracted*
S04	STATIN Labour Force Tables downloadable workbook (2025)	Historical cross-check; download ends July 2025, not current baseline *Workbook read*
S05	STATIN National Accounts methodology (2026)	2008 SNA and JIC 2016; disaggregated historical IO table available at cost *Web page read*
S06	STATIN GDP by expenditure and income at current prices 2015 to 2023 (2023)	2023 GDP compensation taxes subsidies mixed income; JMD million; published via STATIN Annual GDP page *Full table extracted*
S07	STATIN Input Output table 2007 (2007)	Historical structure only; not used as current 2026 multipliers *Table read*
S08	O NET Resource Center Database 31.0 (2026)	Task statements and occupation CSV; 21 representative US occupations; database CC BY 4.0 *CSV downloaded and read*
S09	ILO Generative AI and Jobs A Refined Global Index of Occupational Exposure (2025)	Gmyrek et al.; DOI 10.54394/HETP0387; exposure versus displacement; need local microdata *Publication summary read*
S10	ILO ISCO 08 structure and definitions (2008)	Task-based occupations; major groups and need for detailed crosswalk *Classification page read*
S11	World Bank Digital Economy Country Diagnostic Jamaica (2024)	Executive summary and contents; infrastructure skills firms and trust *PDF sections inspected*
S12	IMF Jamaica RFI approval following Hurricane Melissa (2026)	16 January 2026; recovery and external financing context, not AI impact *Release read*
S13	MIIC Jamaica global services and AI (2026)	6 March 2026; more than 50000 global digital services workers reported; policy view is not causal evidence *Release read*
S14	Alan Lujan Econ-ARK economic scenarios implementation (2026)	MIT-licensed implementation of the task-based economic framework *Source reviewed and executed*
S17	Acemoglu The Simple Macroeconomics of AI (2024)	DOI 10.3386/w32487; aggregation of task savings *Abstract and metadata only*
S18	Acemoglu and Restrepo Automation and New Tasks (2019)	DOI 10.3386/w25684; displacement and reinstatement *Abstract and metadata only*
S19	Brynjolfsson Li and Raymond Generative AI at Work (2023)	DOI 10.3386/w31161; setting-specific workplace productivity evidence; no effect size transferred *Abstract and metadata only*

ID	Source	Use and access
S20	UNESCO Re|Shaping Policies for Creativity (2026) release (2026)	Creative income, licensing and synthetic content competition; global projections are not transferred to Jamaica *Official release read; no Jamaican effect size inferred*
S21	Bank of Jamaica Balance of Payments data portal (2026)	External-sector data acquisition route; no BPO-only or current sector value-added share obtained *Portal inspected, no sector share calibrated*

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