



Compendium of key analyses for Kentucky

Collaborative Blueprint created by and for Kentucky's Economic Developers



Overview of this document

This document contains the following from the Collaborative Blueprint deliverables:

- Economic overview of Kentucky, focusing on 5 parts: Sectors & Firms, Talent & Human capital, Capital & Innovation, Infrastructure,
 Business climate, and Economic Development Operating Capabilities
- The Sectors & Firms section provides an overview of employment specialization by industry.
- Where applicable, the levers are analyzed through multiple lenses: state-wide, geographic breakdown, and by demographic group
- Data as of Dec 2023

Analyses were completed against a 6 part framework

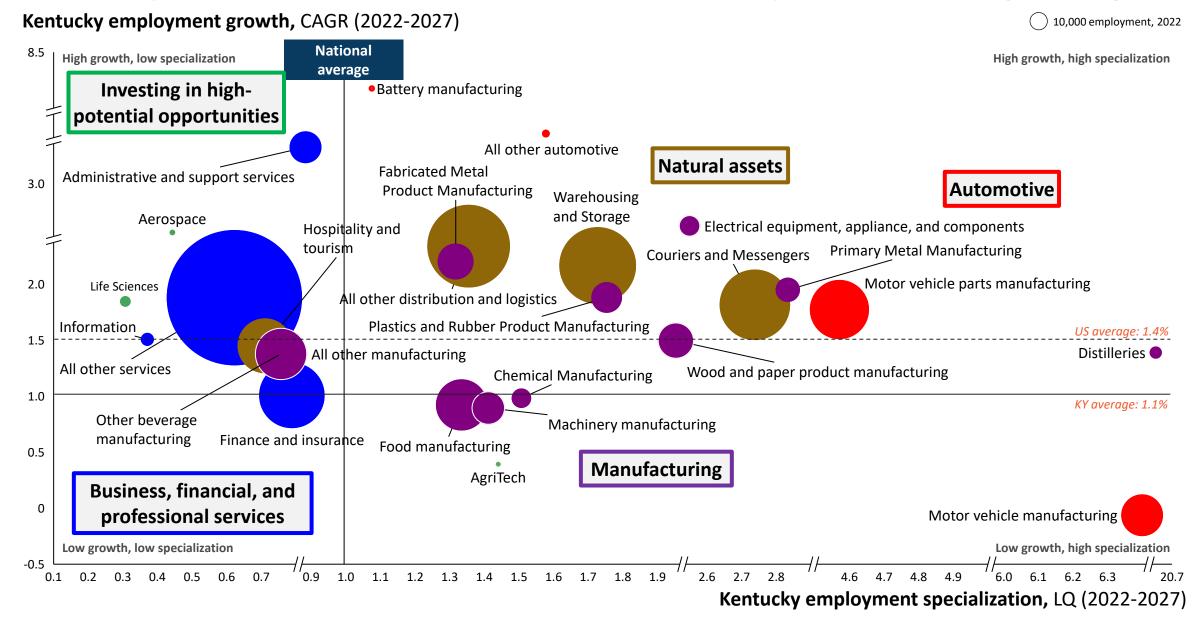


- Sectors & Firms
- 2 Talent & Human capital
- Capital & Innovation
- **4** Infrastructure
- **5** Business climate
- **Economic Development Operating Capabilities**

Where applicable, the levers are analyzed through multiple lenses: state-wide, geographic breakdown, and by demographic group

1. Sectors and firms

Kentucky has a mix of tradable sectors that are specialized and growing





Kentucky has earned the "right to win" and has "opportunities to win" across priority sectors

ı				Where Kentuck	y has "earned	right to win"						Where Ker	ntucky could se	e "opportunitie	es to win"		
Priority sectors	Share of total employ- ment in KY (2022, %)	KY employ- ment specializ- ation (2022, location quotient)	Historical employment growth in KY relative to U.S. (2022-27)	Projected employment growth in KY relative to U.S. (2022-27)	KY Research & Develop- ment spend ¹ (2021, \$M)	KY patents ³ (2016-21, #)	KY share of U.S. venture capital (VC) investment ⁴ (2017-2022, %)	KY share of U.S. foreign direct investment (FDI) (2017-2022, %)	KY exports⁶ (2017-2022, \$M)	U.S. projected employ- ment growth (2022-27, %)		KY average yearly wage (2022, \$ thousand)	U.S. average yearly wage (2022, \$ thousand)	Employment multiplier (2022)			Stakeholder engagement (% ranked as top 3 most important industry)
Traditional auto- motive/electric vehicles	60.9	4.3	-1.8	-0.5	101	342	0.4	12	30,172	1.9	105	68.5	72.7	2.7	140.1	90.6	72
Materials	61.3	1.7	0.4	0.7	275	658	n/a ⁵	3.3	26,706	1.2	172	71.0	74.7	2.3	n/a ⁵	78.4	16
Food/beverage processing	38.6	1.5	0.5	0.5	75	170	0.02	9.2	5,025	1.6	167	66.2	57.7	2.9	36.6	28.1	18
Other manufacturing	79.6	1.2	-0.5	0.9	151	1960	0.2	2.1	34,318	0.6	146	65.8	81.4	2.1	125.6	88.0	66
Distribution and logistics	127.7	1.8	-0.9	-0.1	3	920	0.2	2.0	n/a	2.3	665	62.7	60.2	1.8	135.1	9.8	49
Hospitality and tourism	30.4	0.7	1.8	0.3	n/a	595	n/a⁵	0	n/a	2.6	447	36.9	53.9	1.6	n/a⁵	8.8	75
Business, financia and professional services		0.7	-0.4	-0.2	157	440	0.01	0.1	n/a	2.1	1,703	87.9	135.5	2.2	170.5	47.9	82
- Aerospace	2.9	0.4	-0.2	4.6	<1	97	0.03	2.2	64,889 ⁷	0.6	14	81.1	113.2	2.2	18.4	4.3	18
AgriTech	1.6	1.4	-1.8	-1.3	<0.5	11	1.3	0	0	1.7	8	56.1 ⁸	67.7	1.8	20.8	0.5	26
Life Sciences	5.9	0.3	0.9	1.4	498 ²	467	0.2	0.1	16,513	2.3	176	96.0	140.7	2.2	272.6	31.1	23

NSF R&D categories are not directly aligned to sector definitions by 6-digit NAICS codes; R&D funding is directional, not comprehensive

Least differentiated

Wage data is at the NAICS code level; wages for AgriTech may be higher based on occupation type within the sector (e.g., software engineer, project manager)



Most differentiated

Life Sciences R&D spend is 2021 academic R&D; data for remaining sectors are 2020 corporate R&D spend

USPTO patents granted 2017-2021, based on assignee location, patents can be assigned to multiple industries

PitchBook data technology verticals are not directly aligned to sector definitions by 6-digit NAICS codes; VC funding is directional, not comprehensive

PitchBook data technology verticals did not directly align to Materials or Hospitality & Tourism sectors; VC funding may be present at a more granular level for those sectors

Exports of goods only, does not include services

Includes aerospace parts not manufactured in Kentucky that are repackaged and shipped out of Kentucky from the GE Erlanger Parts Warehouse at the Cincinnati/Northern

Kentucky's regions have different strengths

LQ≥0.7 LQ≥1 LQ≥2 LQ≥3 LQ≥4

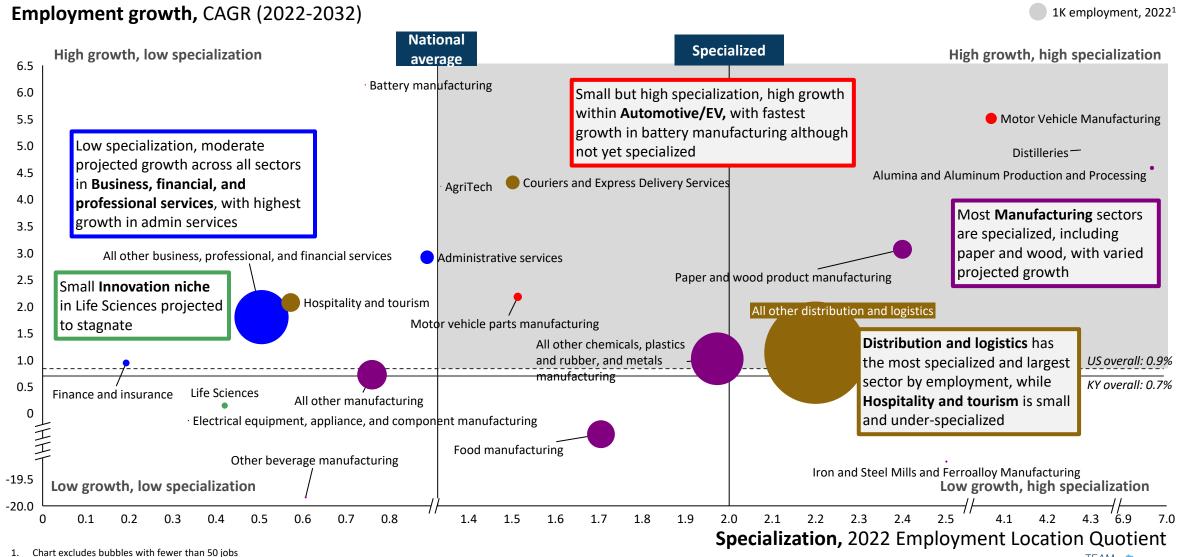
				West KY employment specialization (LQ)			employment specialization (LQ)			Central KY employment specialization (LQ)			East KY employment specialization (LQ)					
Priority sectors		KY LQ ¹	Green River	Penny- rile	Purchase	Barren River	Lake Cumber- land	Lincoln Trail	Blue- grass	KIPDA	Northern KY	Big Sandy	Buffalo Trace	Cumber- land Valley	FIVCO	Gateway	KY River	
	Traditional automotive and electric vehicles	4.3	2.0	4.0	1.9	9.9	5.8	8.7	4.9	4.8	1.4	0.5	3.5	3.7	0.0	4.0	0.0	
	Materials	1.7	4.5	1.3	2.1	3.4	1.1	2.5	1.3	1.2	2.0	0.2	1.3	1.0	1.5	2.7	0.3	
	Food and beverage processing	1.2	1.4	0.8	1.0	1.4	1.9	1.7	1.2	1.3	1.1	0.2	2.5	1.0	0.8	1.7	0.2	
	Other manufacturing	1.5	4.4	1.2	1.6	2.0	1.8	2.5	1.0	1.0	1.7	0.6	1.5	2.2	0.9	3.9	0.2	
§ (S)	Distribution and logistics	1.8	0.7	1.3	2.1	0.9	0.6	0.7	0.9	2.6	4.0	0.5	0.9	1.2	1.1	0.8	0.8	
	Hospitality and tourism	0.7	0.4	0.6	0.6	0.8	0.5	0.4	0.8	0.8	0.9	0.2	0.4	0.6	0.4	0.3	0.3	
Q	Business, financial, and professional services	0.7	0.2	0.2	0.5	0.4	0.2	0.4	0.6	1.0	0.8	0.2	0.3	0.5	0.3	0.3	0.3	
-`	Aerospace	0.4	0.8	0.9	0.0	0.3	0.2	1.1	0.7	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	
	AgriTech	1.4	1.5	7.8	1.3	3.1	14.3	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Life sciences	0.3	0.2	0.3	0.4	0.3	0.2	0.1	0.5	0.2	0.4	0.0	0.0	0.1	0.1	0.3	0.2	

South-Central KY

1.Note: Location quotient (LQ) is measured as the ratio of a sector's share of employment in a region to that sector's share of employment in the US

Source: Lightcast, accessed 8/30/2023

West: Purchase ADD "Bubble chart": "right to win" and "want to win"



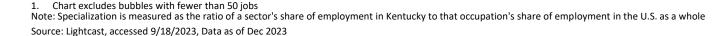
Note: Specialization is measured as the ratio of a sector's share of employment in Kentucky to that occupation's share of employment in the U.S. as a whole Source: Lightcast, accessed 9/18/2023, Data as of Dec 2023



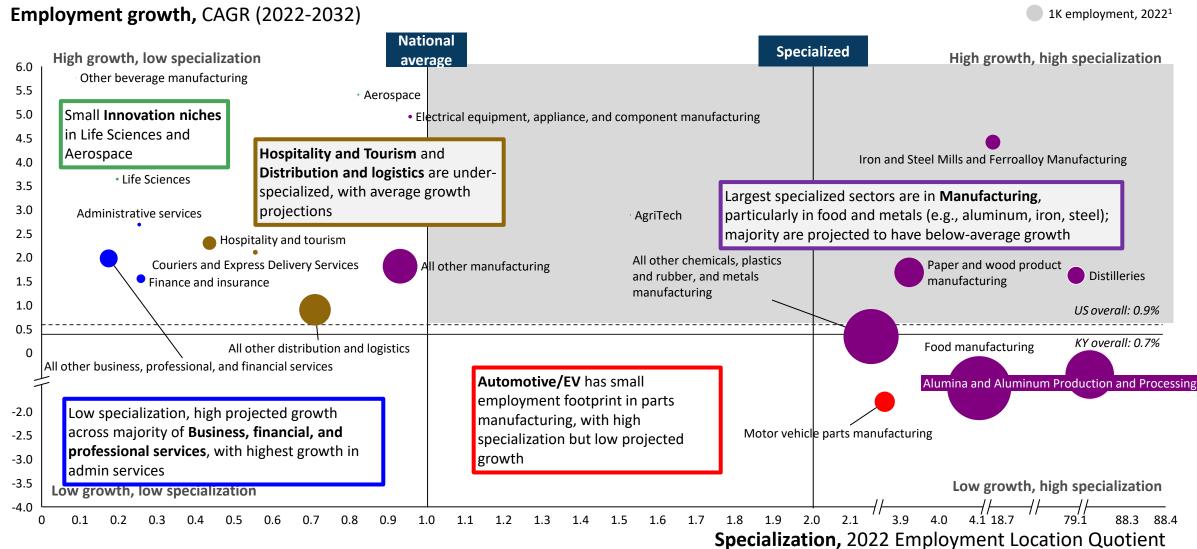
West: Pennyrile ADD "Bubble chart": "right to win" and "want to win"

Employment growth, CAGR (2022-2032) 1K employment, 2022¹ **National Specialized** High growth, high specialization High growth, low specialization average 28.0 Electrical equipment, appliance, and component manufacturing Region has highest specialization in Battery manufacturing • battery within Automotive/EV, which is Couriers and Express Delivery Services 5.5 projected to grow while parts 5.0 Life Sciences manufacturing and assembly decline 4.5 Small Innovation niche in Life Hospitality and tourism Alumina and Aluminum Production and Processing Sciences; AgTech and Aerospace All other automotive Administrative services have greater specialization but are both projected to decline All other distribution and logistics Above-average growth in **Hospitality** 2.0 and Tourism; Largest specialized Finance and insurance Distilleries Food manufacturing 1.5 cluster is in Distribution and US overall: 0.9% 1.0 **logistics**, with moderate projected 0.5 KY overall: 0.7% growth 0 Motor vehicle parts manufacturing All other business, professional, and financial services -0.5 Except for aluminum, most Manufacturing Motor Vehicle Manufacturing -1.0 sectors are not specialized and have average Low specialization, moderate projected growth across All other chemicals, plastics AgriTech -1.5or low projected growth and rubber, and metals majority of Business, financial, and professional services, -2.0 manufacturing with highest growth in admin services -2.5 All other manufacturing -3.0 Paper and wood product manufacturing Low growth, low specialization Aerospace Low growth, high specialization Other beverage manufacturing 0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.55 0.60 0.65 0.70 0.75 0.80 0.85 0.90 0.95 1.00 1.05 1.10 1.15 1.20 1.25 1.30 1.35 1.40

Specialization, 2022 Employment Location Quotient



West: Green River ADD "Bubble chart": "right to win" and "want to win"

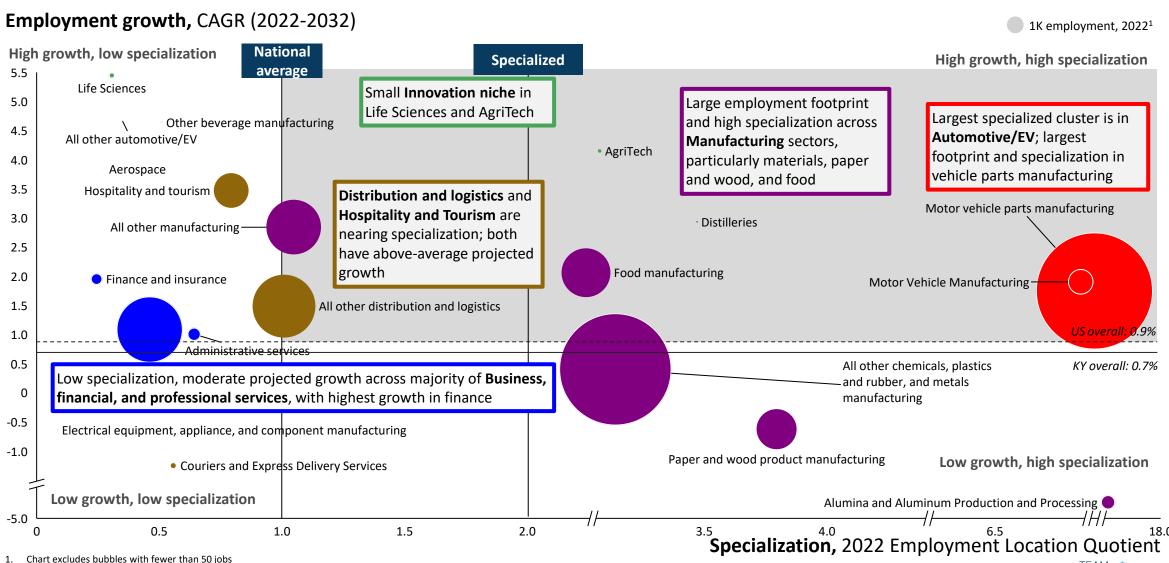


[.] Chart excludes bubbles with fewer than 50 jobs

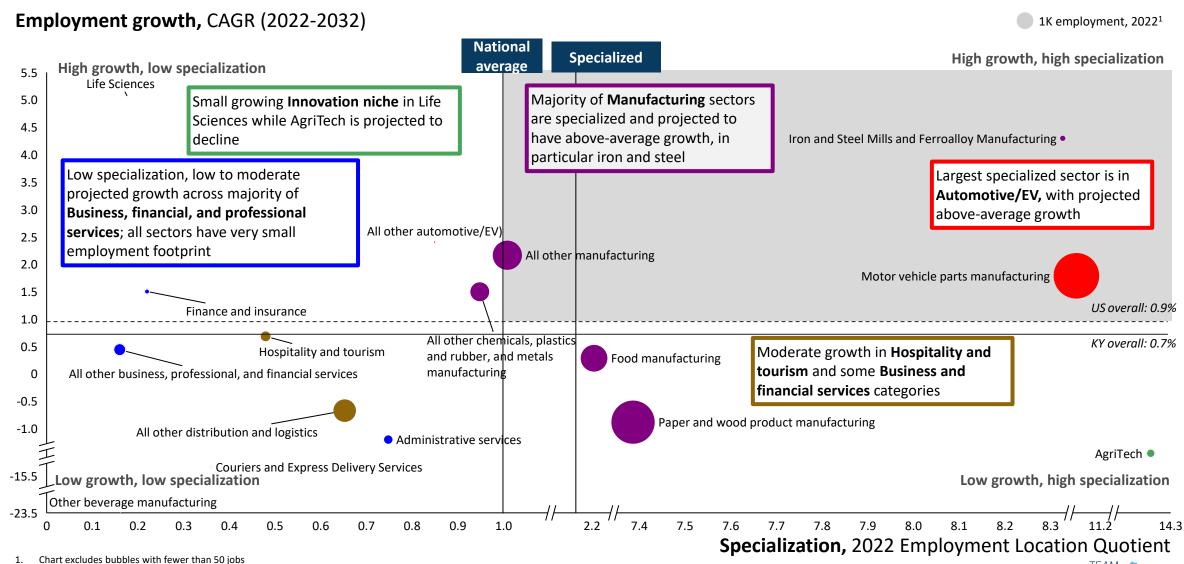
KENTUCKY.

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South-Central: Barren River ADD "Bubble chart": "right to win" and "want to win"



South-Central: Lake Cumberland ADD "Bubble chart": "right to win" and "want to win"



Note: Specialization is measured as the ratio of a sector's share of employment in Kentucky to that occupation's share of employment in the U.S. as a whole Source: Lightcast, accessed 9/18/2023, Data as of Dec 2023

South-Central: Lincoln Trail ADD "Bubble chart": "right to win" and "want to win"

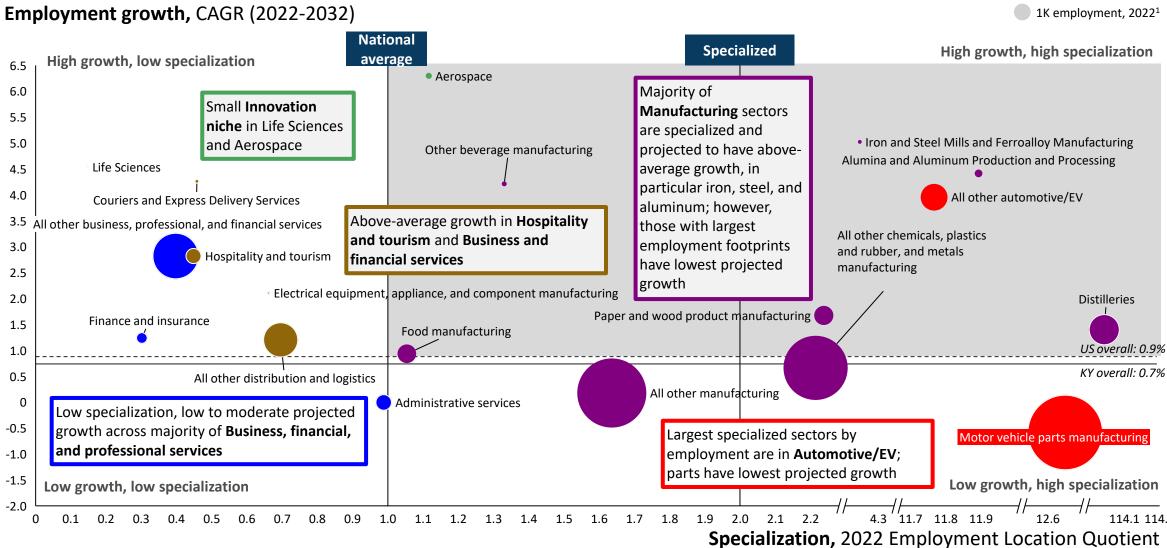
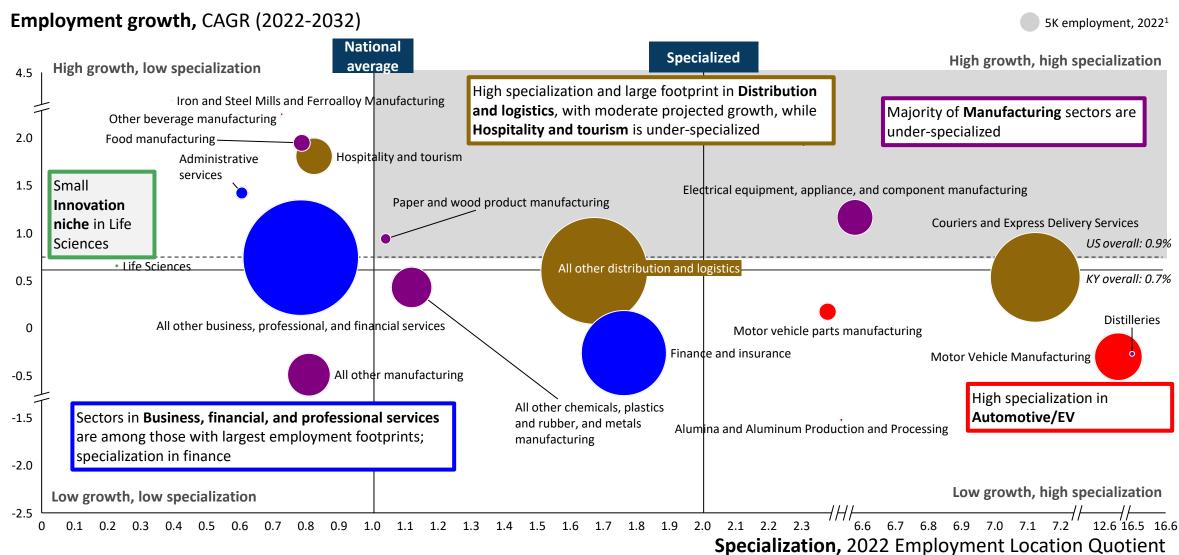


Chart excludes bubbles with fewer than 50 jobs

Central: KIPDA ADD "Bubble chart": "right to win" and "want to win"

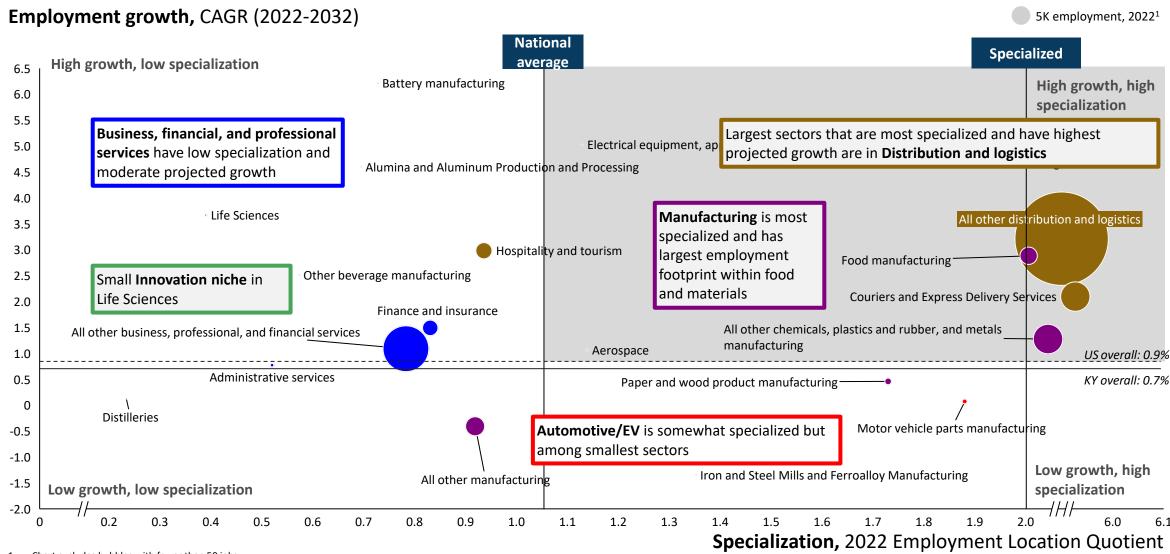


^{1.} Chart excludes bubbles with fewer than 50 jobs

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Central: Northern Kentucky ADD "Bubble chart": "right to win" and "want to win"



^{1.} Chart excludes bubbles with fewer than 50 jobs

Note: Specialization is measured as the ratio of a sector's share of employment in Kentucky to that occupation's share of employment in the U.S. as a whole

Source: Lightcast, accessed 9/18/2023, Data as of Dec 2023

Central: Bluegrass ADD "Bubble chart": "right to win" and "want to win"

Employment growth, CAGR (2022-2032)

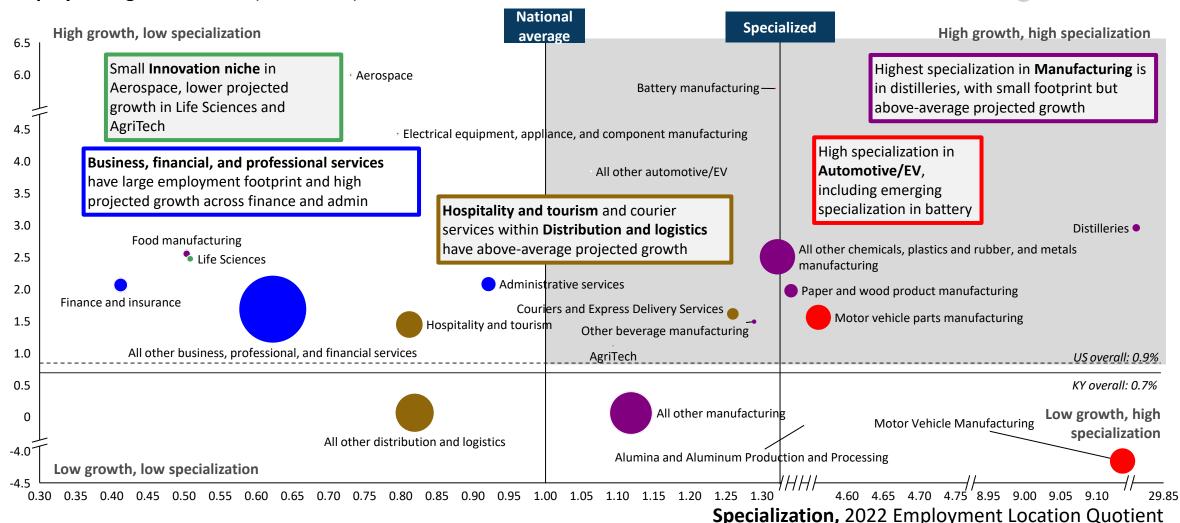
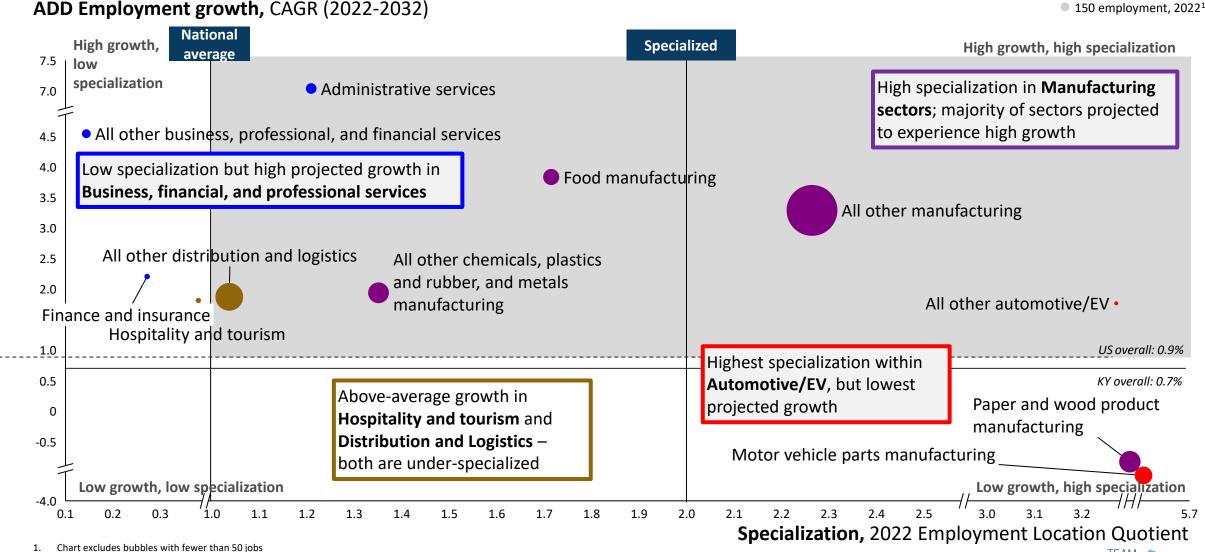


Chart excludes bubbles with fewer than 50 jobs

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5K employment, 20221

East: Buffalo Trace ADD "Bubble chart": "right to win" and "want to win"



Note: Specialization is measured as the ratio of a sector's share of employment in Kentucky to that occupation's share of employment in the U.S. as a whole Source: Lightcast, accessed 9/18/2023

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East: Gateway ADD "Bubble chart": "right to win" and "want to win"

ADD Employment growth, CAGR (2022-2032) 150 employment, 2022¹ **National Specialized** High growth, high specialization High growth, low specialization average 7.0 Administrative services Motor Vehicle Manufacturing 5.5 All other business, professional, and financial services High specialization in 5.0 Low specialization but high projected growth across all Automotive/EV; range of sectors in Business, financial, and professional services growth projections 2.5 Iron and Steel Mills All other distribution and logistics Paper and wood product and Ferroalloy Finance and insurance 2.0 Manufacturing High specialization across Materials 1.5 **sectors**; range of growth projections Hospitality and tourism 1.0 US overall: 0.9% Above-average growth in Electrical equipment, 0.5 KY overall: 0.7% **Hospitality and tourism** and All other chemicals, plastics appliance, and component manufacturing Distribution and Logistics and rubber, and metals both are under-specialized Motor vehicle parts manufacturing manufacturing -0.5 Food manufacturing All other manufacturing Life Sciences -12.5 Small **Innovation niche** in Life Sciences projected to significantly decline in growth Low growth, high specialization Low growth, low specialization -13.01.6 2.1 1.2 1.4 1.5 1.7 Specialization, 2022 Employment Location Quotient

^{1.} Chart excludes bubbles with fewer than 50 jobs

Note: Specialization is measured as the ratio of a sector's share of employment in Kentucky to that occupation's share of employment in the U.S. as a whole

Source: Lightcast, accessed 9/18/2023, Data as of Dec 2023

East: FIVCO ADD "Bubble chart": "right to win" and "want to win"

ADD Employment growth, CAGR (2022-2032) 150 employment, 2022¹ **National Specialized** average 5.6 High growth, low specialization High growth, Electrical equipment, appliance, and component manufacturing 5.4 high Low specialization but high 5.2 specialization Administrative services projected growth across all 5.0 Alumina and Alumlinum sectors in **Business**, **financial**, **and** All other chemicals, plastics Processing and Production and rubber, and metals professional services manufacturing All other business, professional, and financial services Large cluster of **Manufacturing** sectors 1.8 with above-average growth 1.6 All other manufacturing Finance and insurance 1.4 Hospitality and tourism 1.2 1.0 US overall: 0.9% Average growth but low specialization in Hospitality 0.8 Food manufacturing and tourism versus low growth but higher KY overall: 0.7% 0.6 All other distribution and logistics specialization Distribution and Logistics 0.4 Low growth, 0.2 high Low growth, low specialization 0 specialization 0.95 1.00 1.05 1.10 1.15 1.20 1.40 1.45 1.50 1.55 1.60 1.65 1.70 1.75 1.80 1.85 1.90 1.95 2.00 ' 10.25 10.30 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.55 0.60 **Specialization, 2022** Employment Location Quotient

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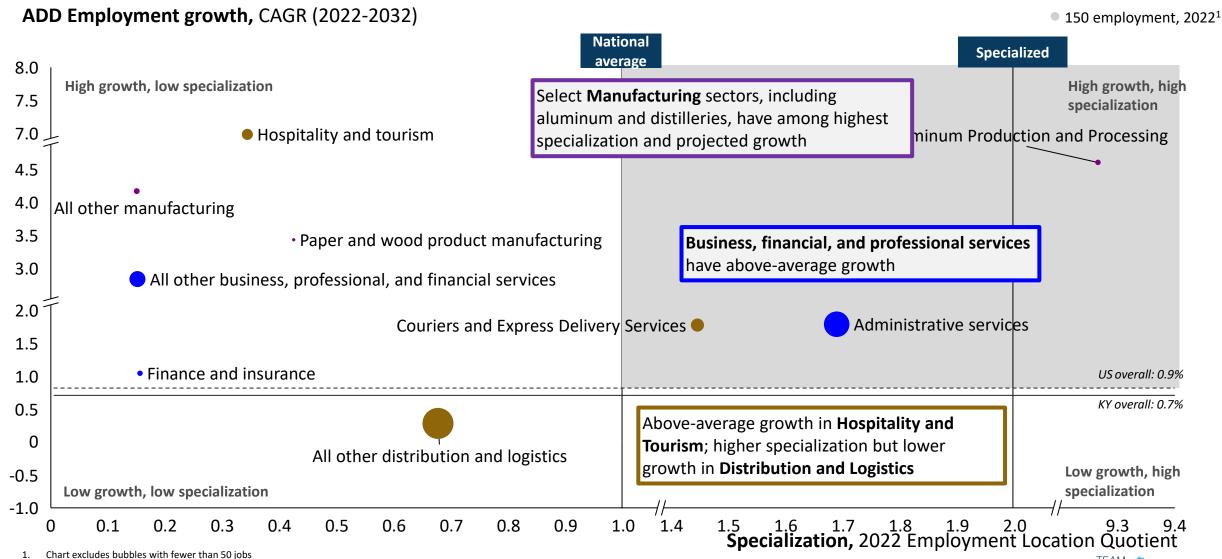
^{1.} Chart excludes bubbles with fewer than 50 jobs

East: Big Sandy ADD "Bubble chart": "right to win" and "want to win"

ADD Employment growth, CAGR (2022-2032) 150 employment, 2022¹ Vational **Specialized** average 6 High growth, low specialization High growth, Automotive/EV is small high 5 but specialized and All other chemicals, plastics Administrative services specialization growing above-average and rubber, and metals 3 manufacturing All other automotive/EV • Couriers and Express Delivery \$ervices 2 All other manufacturing All other business, professional, and financial services Finance and insurance US overall: 0.9% KY overall: 0.7% 0 Food has relatively large employment Food manufacturing Hospitality and tourism in **Manufacturing** but low growth Almost all sectors in Business, financial, and All other distribution and logistics professional services -5 have high projected -6 growth, but all have low Hospitality and Tourism and specialization -7 **Distribution and Logistics** are among Low growth, lowest-growth sectors -8 high specialization Low growth, low specialization 0.10 0.12 0.14 0.16 0.18 0.20 0.22 0.24 0.26 0.28 0.30 0.32 0.34 0.36 0.76 0.78 2.00 2.02 2.04 2.06 2.66 2.68 2.70 2.72 Specialization, 2022 Employment Location Quotient

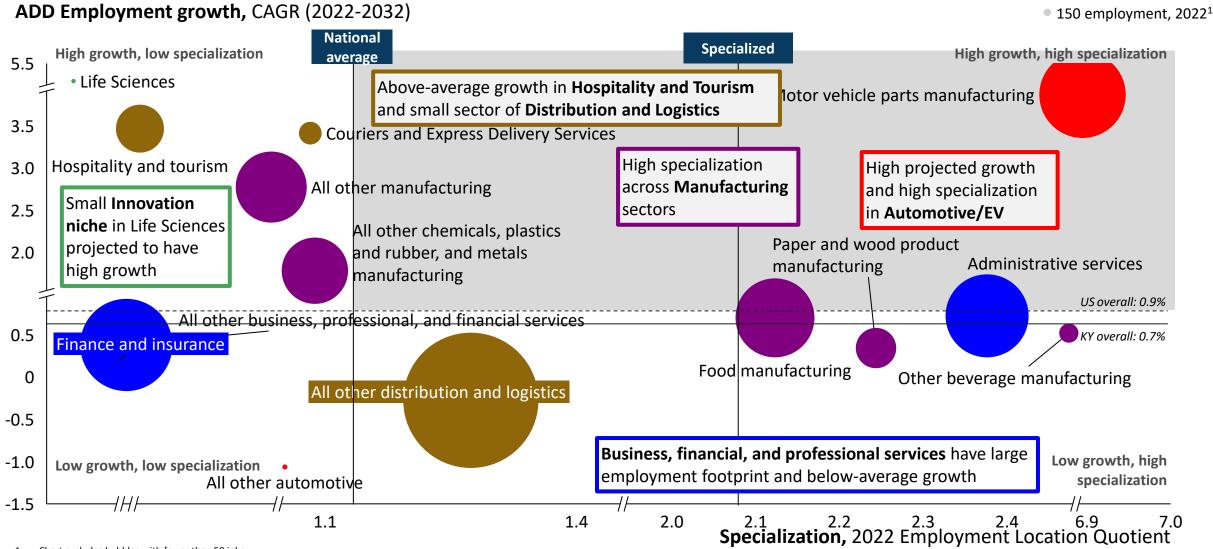
Chart excludes bubbles with fewer than 50 jobs

East: Kentucky River ADD "Bubble chart": "right to win" and "want to win"



Note: Specialization is measured as the ratio of a sector's share of employment in Kentucky to that occupation's share of employment in the U.S. as a whole Source: Lightcast, accessed 9/18/2023, Data as of Dec 2023

East: Cumberland Valley ADD "Bubble chart": "right to win" and "want to win"



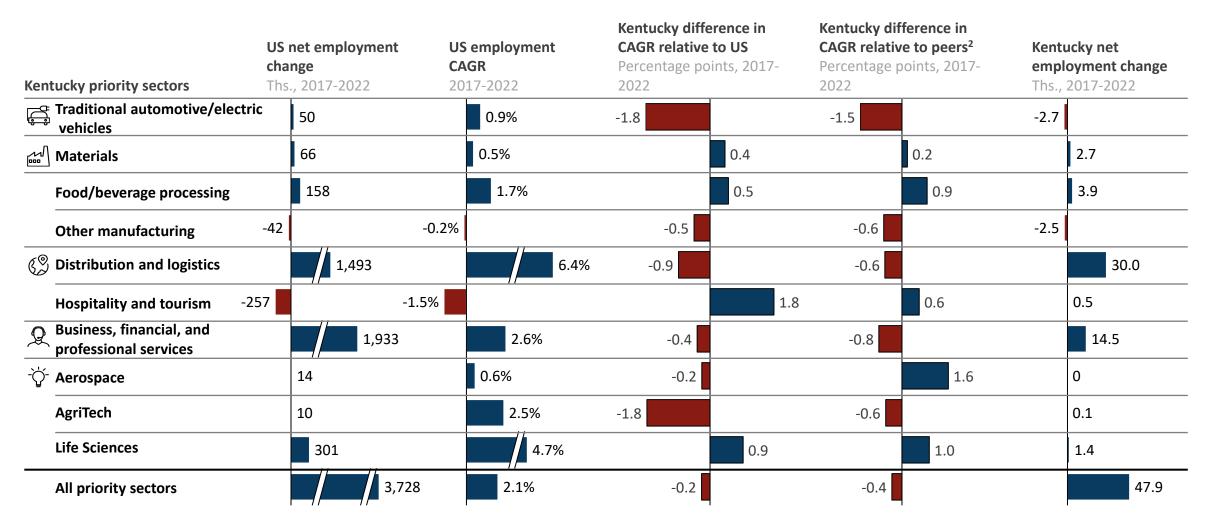
^{1.} Chart excludes bubbles with fewer than 50 jobs

Note: Specialization is measured as the ratio of a sector's share of employment in Kentucky to that occupation's share of employment in the U.S. as a whole

Source: Lightcast, accessed 9/18/2023

Kentucky has lost market share in several sectors in the past 5 years

Historical sector growth



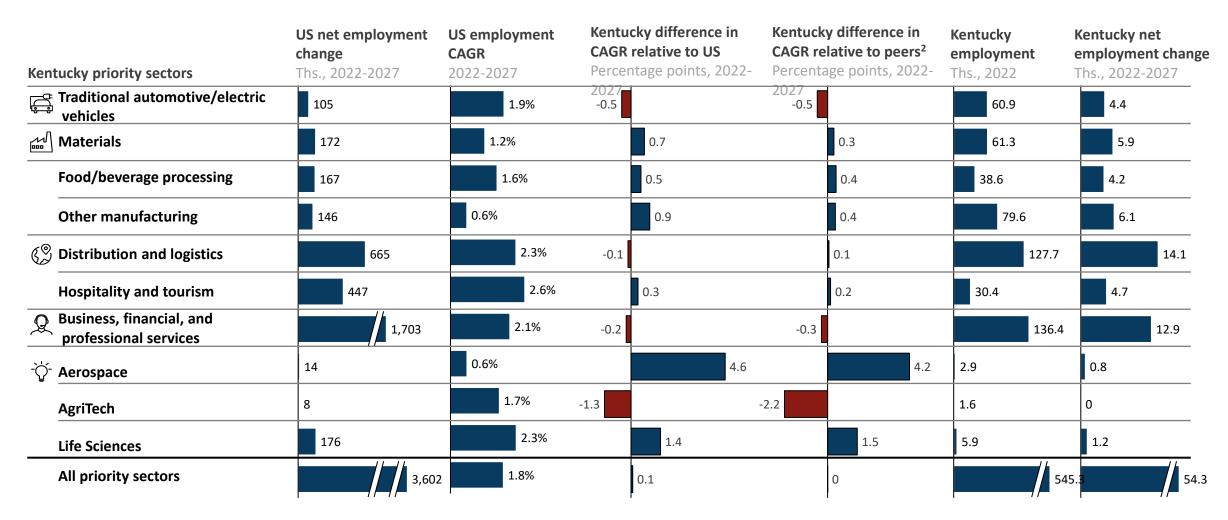
^{1.} All manufacturing not captured in other sectors

Source: Lightcast, accessed 8/30/2023

^{2.} Weighted average of peer states: Alabama, Arkansas, Georgia, Indiana, North Carolina, Ohio, South Carolina, and Tennessee

Projections suggest U.S. growth will create large potential employment growth pools for Kentucky to win

Forecasted sector growth



^{1.} All manufacturing not captured in other sectors

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^{2.} Weighted average of peer states: Alabama, Arkansas, Georgia, Indiana, North Carolina, Ohio, South Carolina, and Tennessee