

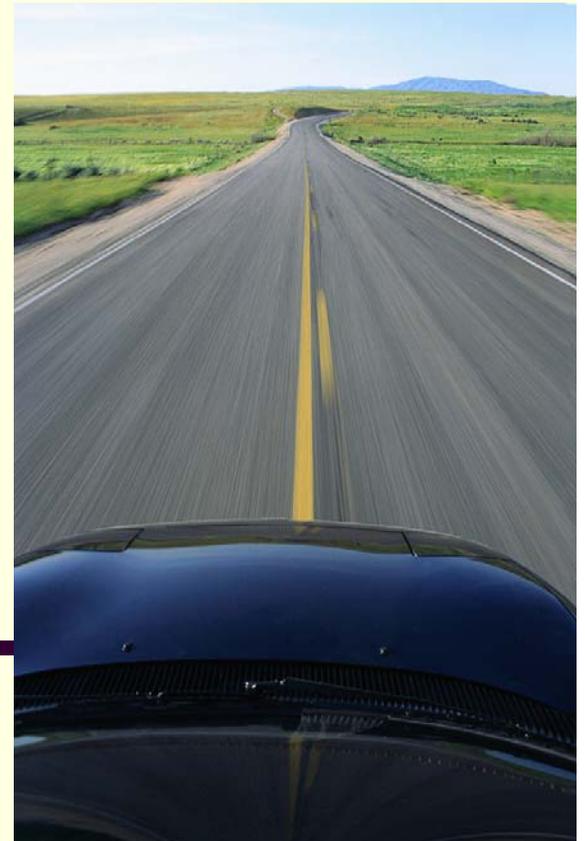


Research & Planning  
Wyoming DOE

# On The Road Again: Wyoming Commuting Patterns

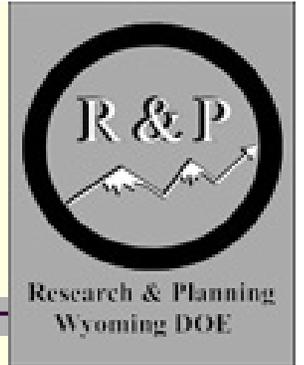
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# Research & Planning:

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## **OUR ORGANIZATION:**

R&P is a separate, exclusively statistical entity.

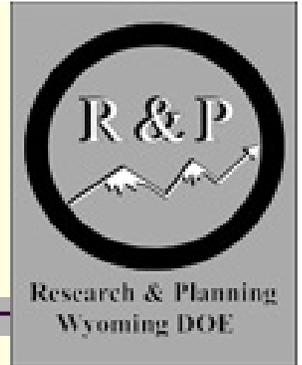
## **WHAT WE DO:**

R&P collects, analyzes, and publishes timely and accurate labor market information (LMI) meeting established statistical standards.

## **OUR CUSTOMERS:**

LMI makes the labor market more efficient by providing the public and the public's representatives with the basis for informed decision making.

# Project History



- Commuting pattern research began as a feasibility study of a Park-n-Ride facility in Teton County (2001)
- Commuting Data for Campbell County--Susan Bigelow, Executive Director Campbell County Economic Development Corporation (CCEDC) 9/24/03
- Some prior research results located at <http://doe.state.wy.us/lmi/commute.htm>
- Latest revision of methodology applied to current study (2006)
  - Latitude and longitude assigned to residence location based on driver's license physical address
  - PO address lat./lon. used for PO boxes
  - Calculate distances where Lat./Lon. assigned

# Commuting Pattern Development



- Two items must be determined:
  - Residence Location
  - Work Location
- In some instances, work location is estimated
- Where possible out of state data are used to model interstate worker flows

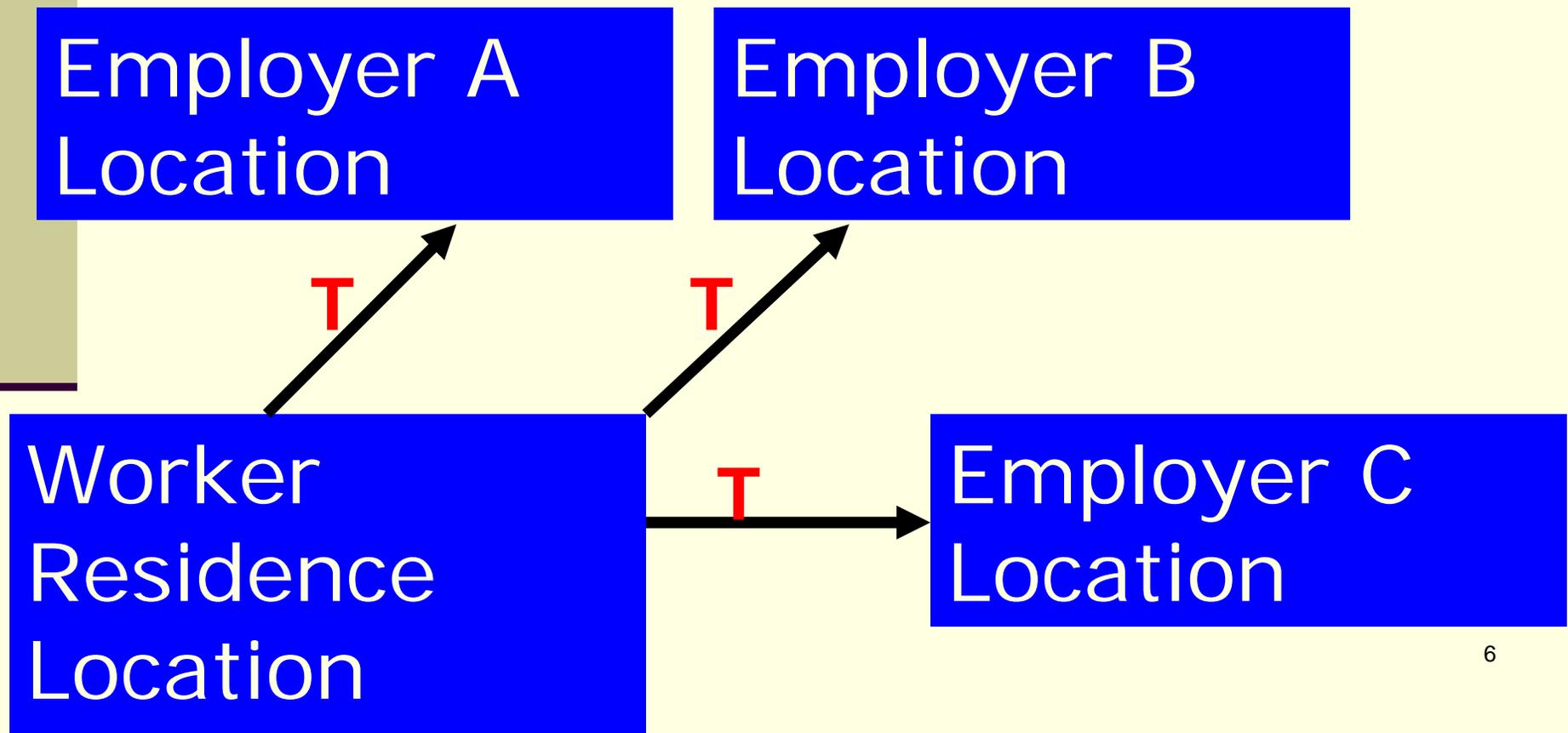
# Data Sources

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- Unemployment Insurance Wage Records
  - Liable employers report all SSNs and wages each quarter
- Employer Master File
  - Contains aggregate information regarding UI liable businesses employment and wages
- WYDOT Driver's License File
  - Contains driver names, SSNs and physical addresses

# Linking Residence to Work

- Link established each quarter for each job a worker holds = **1 Transaction**



# Commuting Terms



- Intercounty Commuting
  - Reside in one county, work in another county (e.g., commute from Douglas to Casper)
- Intracounty Commuting
  - Reside and work in the same county (e.g., commute from Glenrock to Douglas)
- Base County
  - The county being studied (e.g., Campbell)
- Outflow
  - Workers who leave the base county for work in another county (e.g., people residing in Campbell and commuting to Johnson)
- Inflow
  - Workers who arrive in the base county from another county for work (e.g., people residing in Crook who commute to Campbell for work)

# Why Study Worker Commuting Patterns?

**Despite prevention efforts, police see more crashes**    **Suspect flees WHP at 130 mph**

By JOSHUA WOLFSON  
Star-Tribune staff writer Wednesday, August 08, 2007

Tuesday, July 24, 2007

**I-80 poses big burden**

Star-Tribune staff reports

By JARED MILLER

Star-Tribune capital bureau

**On the precipice: Wyo risks economy, way of life without highway funding fix, WYDOT says**

By JARED MILLER

Star-Tribune capital bureau Monday, December 11, 2006

**Gas activity kicks up dirt throughout the West**

By BOB MOEN

Associated Press writer Sunday, December 11, 2005

**Highway funding fix requires huge investment, officials say**

By JARED MILLER

Star-Tribune capital bureau

**Lawmaker: Make I-80 a toll road**

By JARED MILLER

Star-Tribune capital bureau Tuesday, December 12, 2006

**Latest traffic operation leads to 59 tickets**

By JOSHUA WOLFSON

Star-Tribune staff writer Saturday, July 14, 2007

**West Belt Loop could divert traffic**

By JOHN MORGAN

Star-Tribune staff writer Sunday, March 25, 2007

**Tickets result from traffic days**

By JOSHUA WOLFSON

Star-Tribune staff writer Sunday, June 24, 2007

**Motorcycle crashes rise in Wyo**

By JARED MILLER

Star-Tribune capital bureau Wednesday, August 08, 2007

**Patrol adds Pinedale division**

By the Star-Tribune staff Monday, July 02, 2007

**Officials plan mass flu response**

By ALLISON RUPP

Star-Tribune staff writer Wednesday, June 20, 2007

**Mumps spreads across Midwest**

By MIKE WILSON and MIKE STOBBE

Associated Press writers Thursday, April 20, 2006

# Commuting Study and Context Analysis



- Focus on one net outflow county (Converse) and two net inflow counties (Campbell & Natrona)
  - Historical Trends
    - Gross and net flow rates
    - Rates by sex
    - Rates by age group
  - Implications
- The “Demographic Sledgehammer”
  - Rapidly aging population
  - Effects on consumer spending and commuting<sup>9</sup>



# Commuting Study Results<sup>1</sup>



- Gross and net flows by county
- Flows by age group
- Flows by sex
- Wage differentials
- Imported labor

<sup>1</sup>Results available in tabular form on the web; shown here in graphical form for illustrative purposes.

**Figure: Campbell County Commuting Flows, 2000Q4-2005Q4**

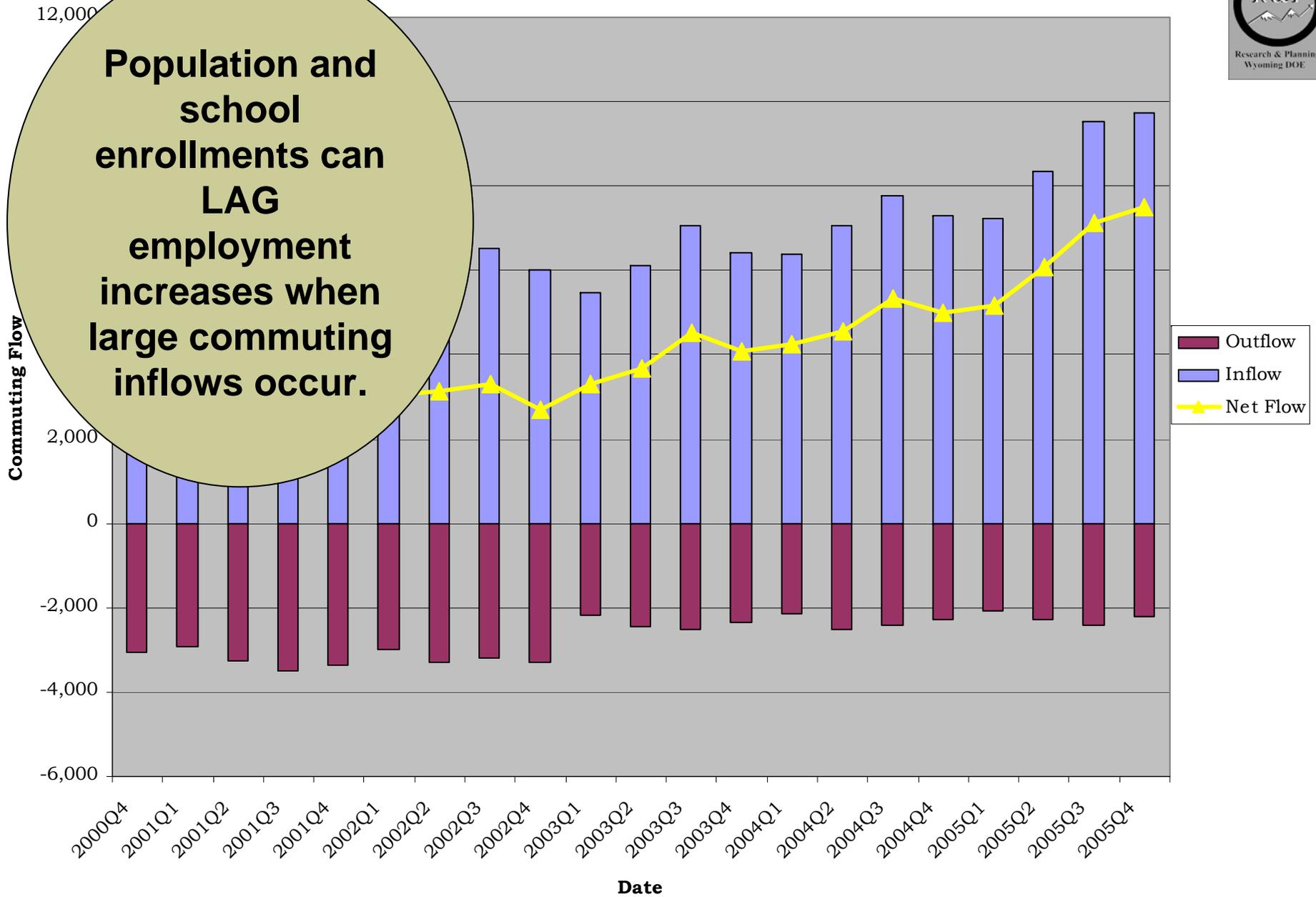


Figure: Natrona County Commuting Flows, 2000Q4-2005Q4

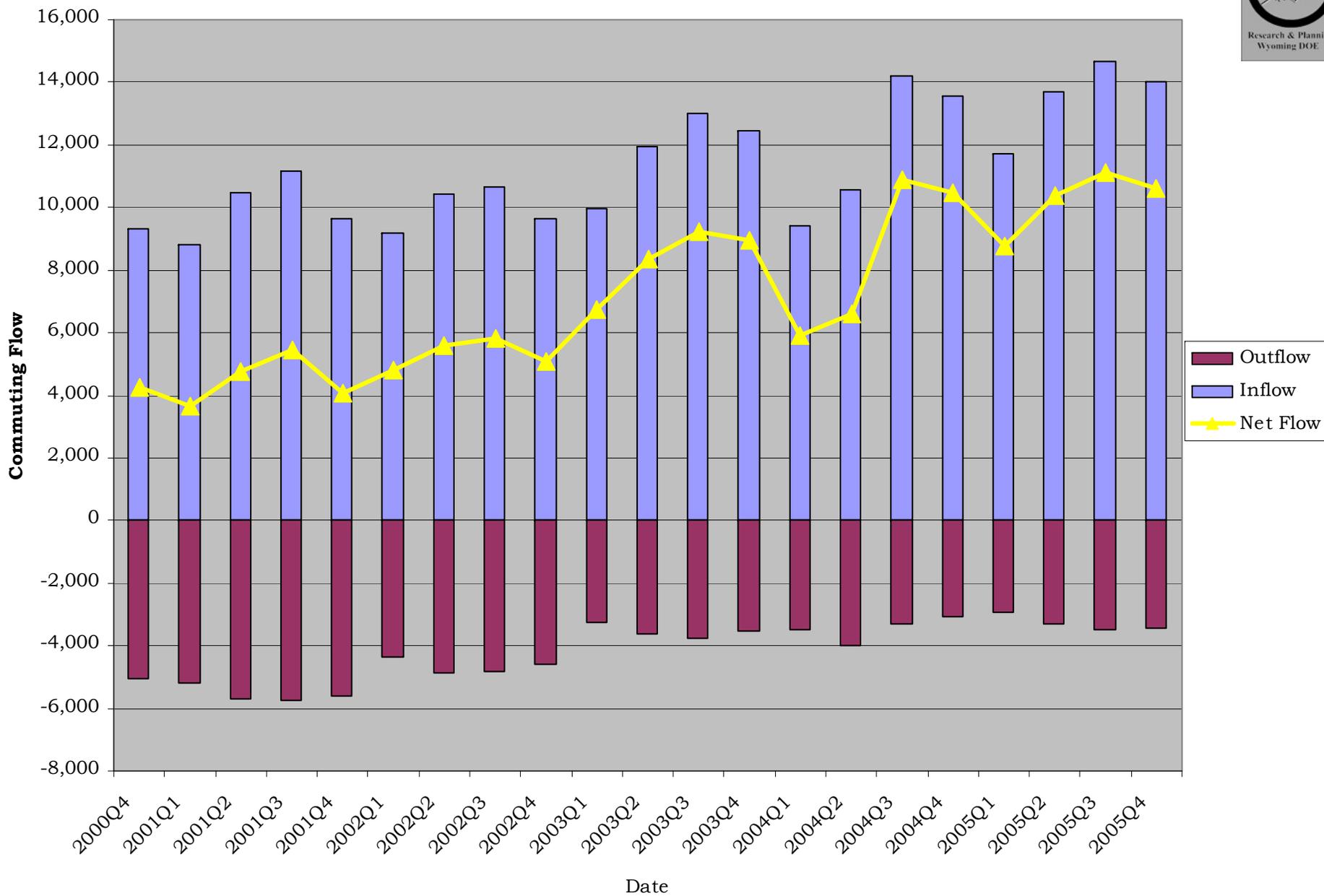
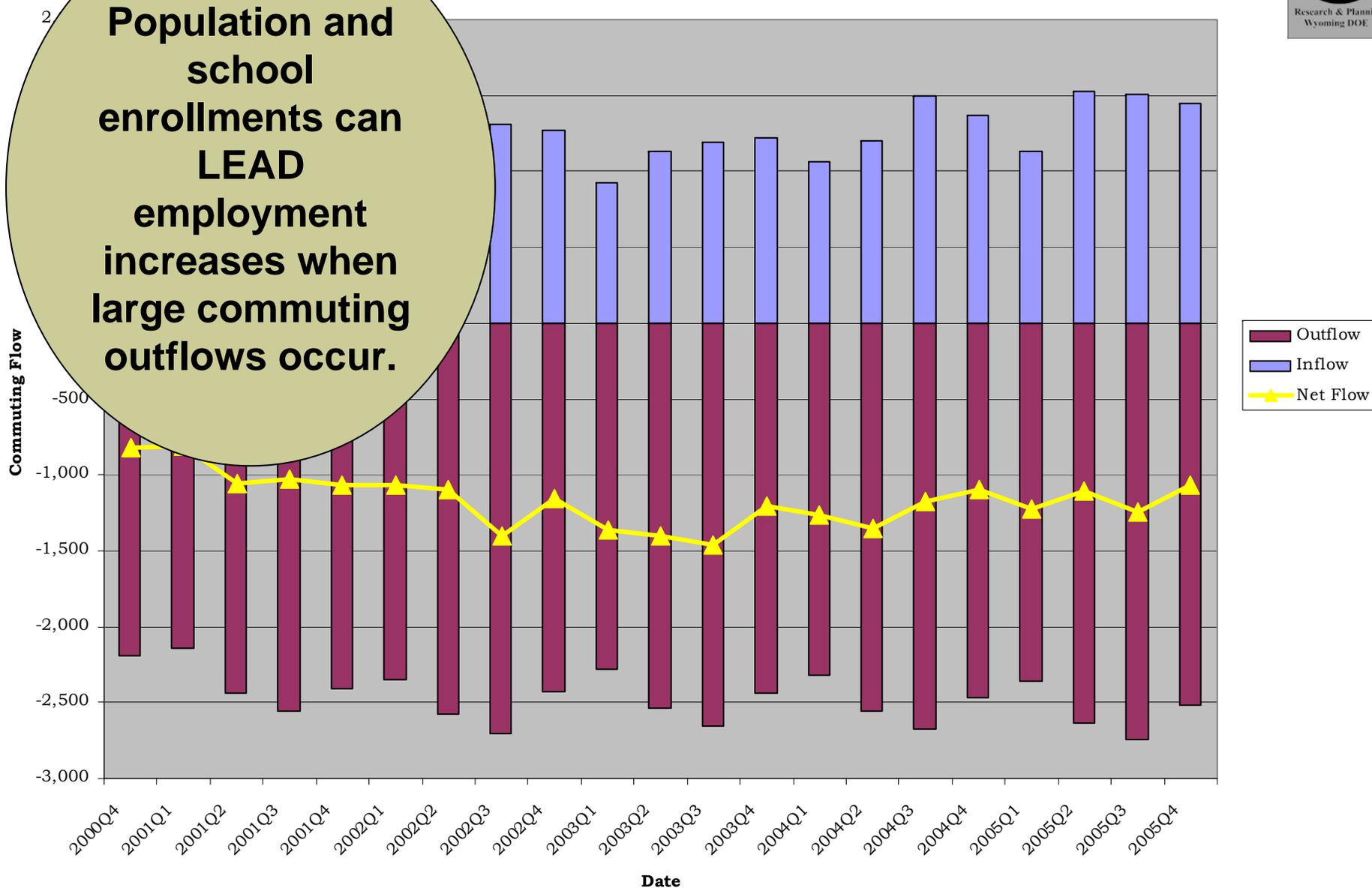


Figure: Converse County Commuting Flows, 2000Q4-2005Q4



# Commuting Study Results

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- Gross and net flows by county
- Flows by age group
- Flows by sex
- Wage differentials
- Imported labor

**Figure: Converse County Commuting Outflows by Age Group**

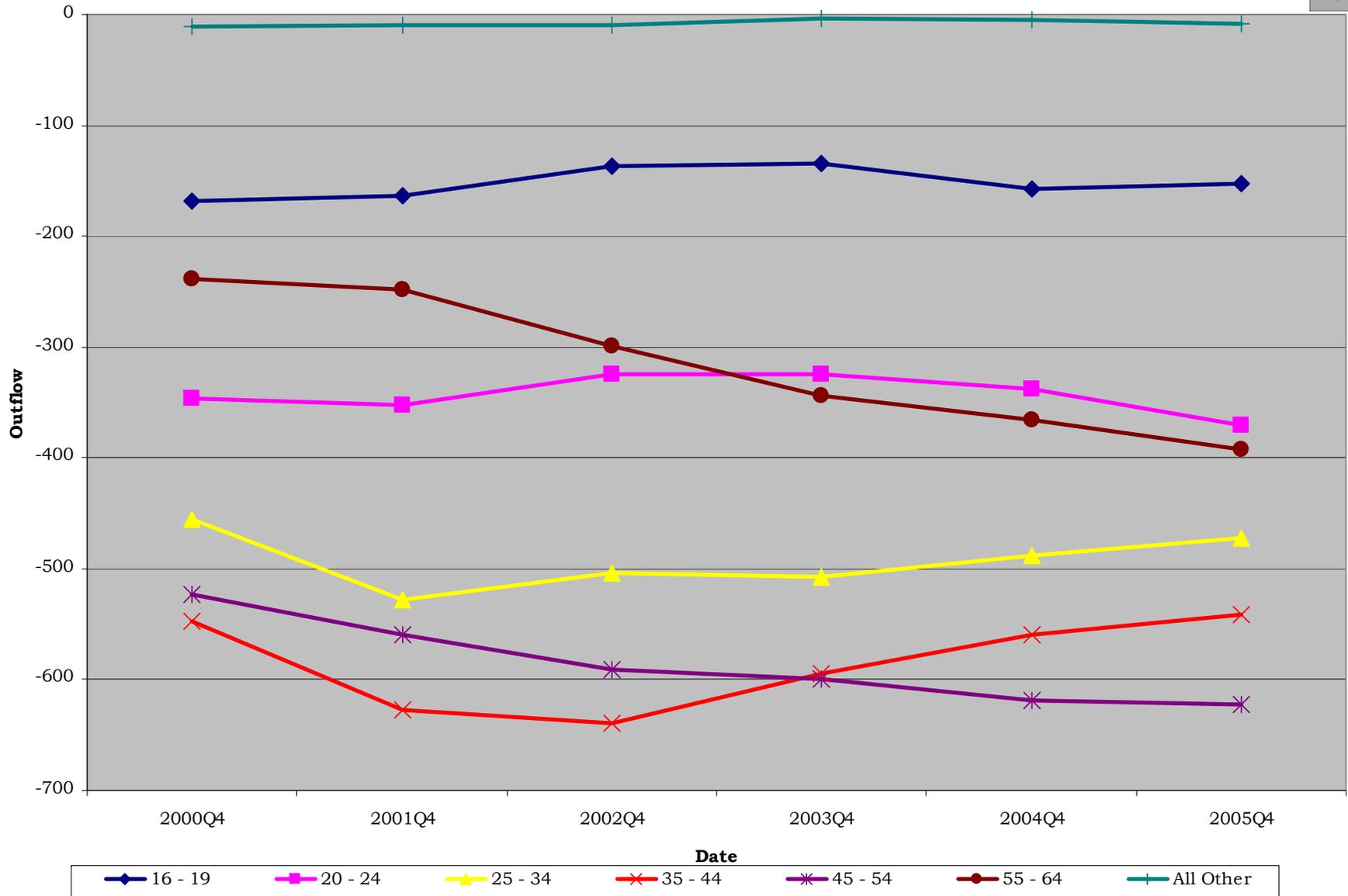


Figure: Natrona County Commuting Inflows by Age Group

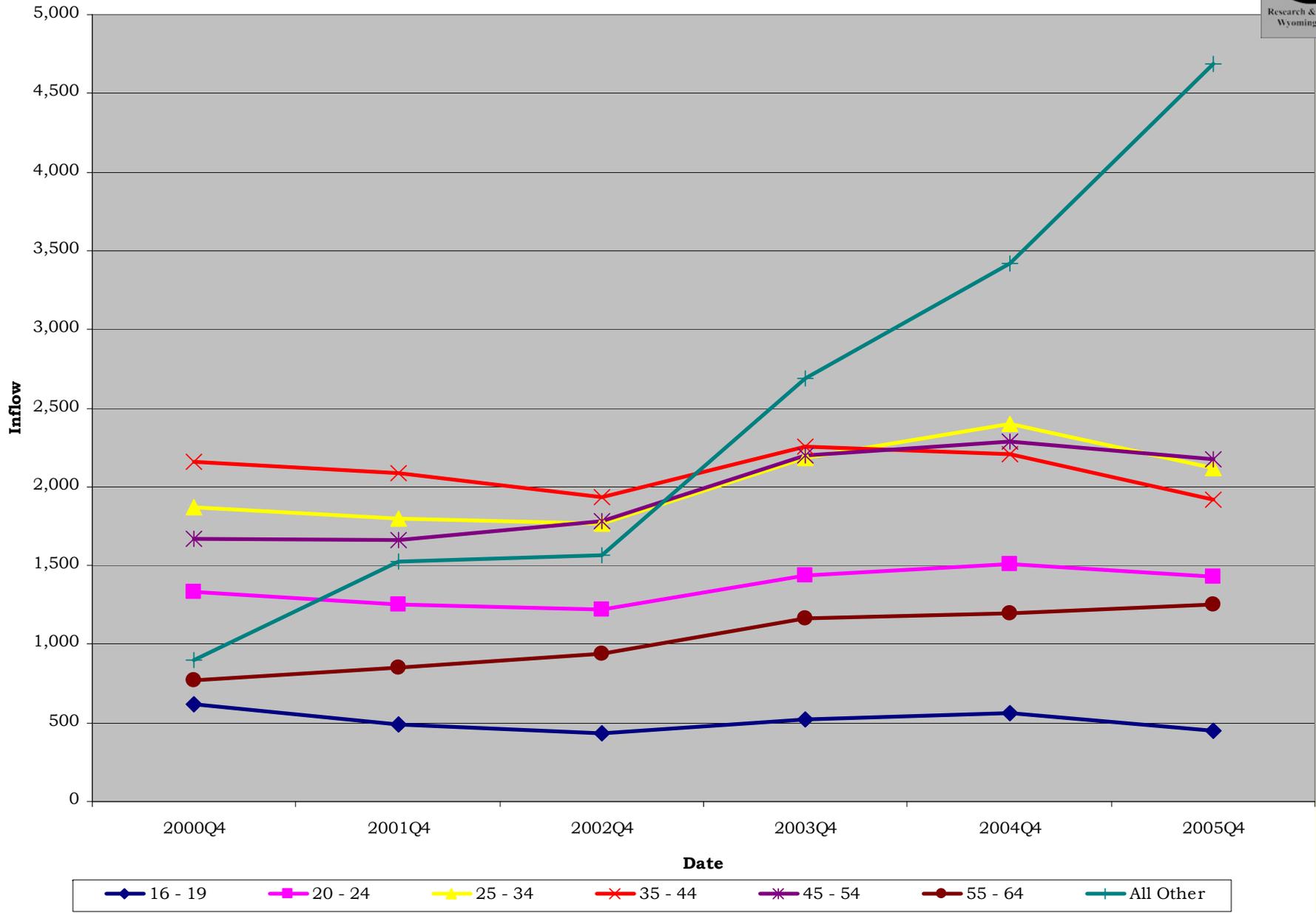
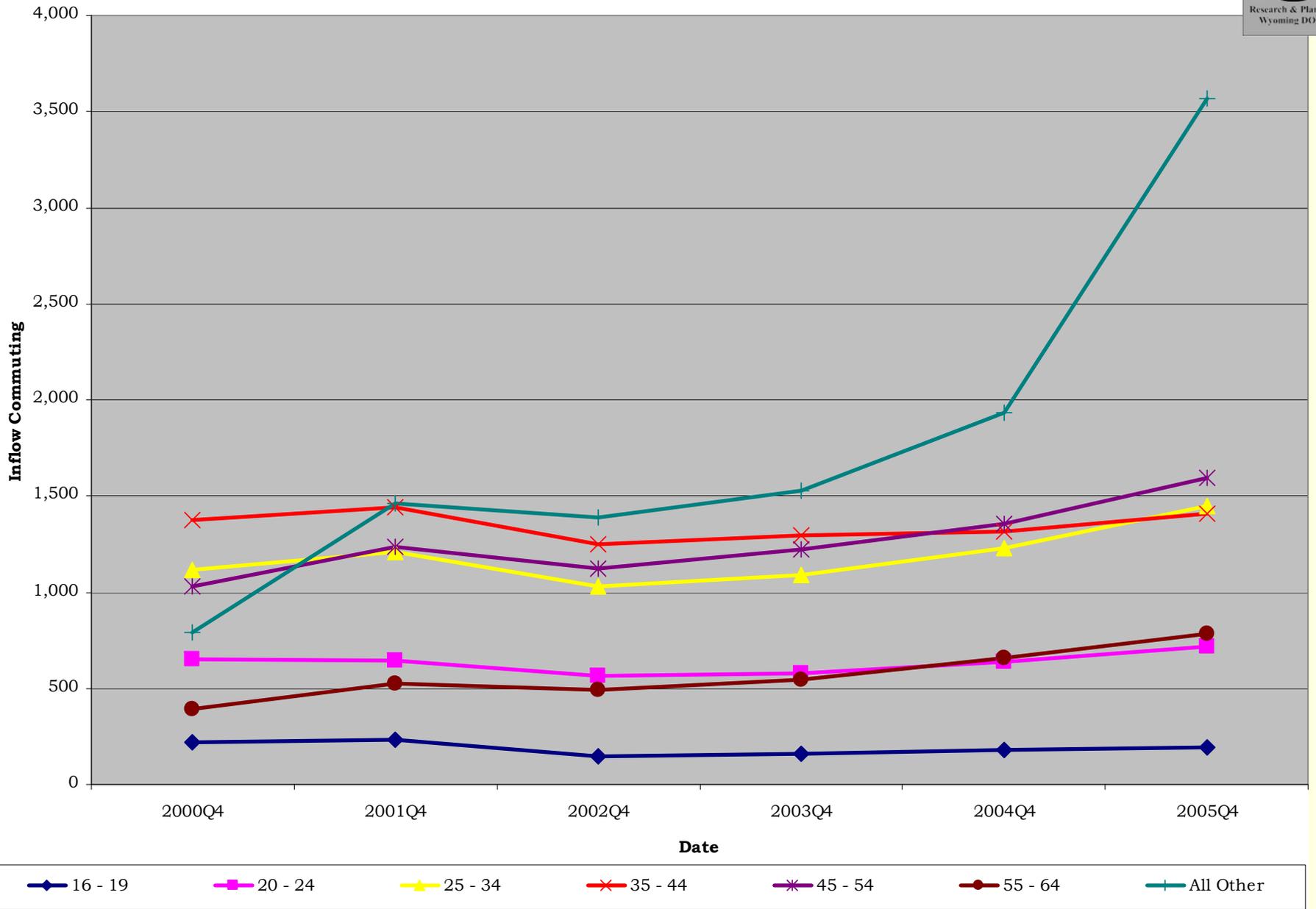


Figure: Campbell County Commuting Inflows by Age Group



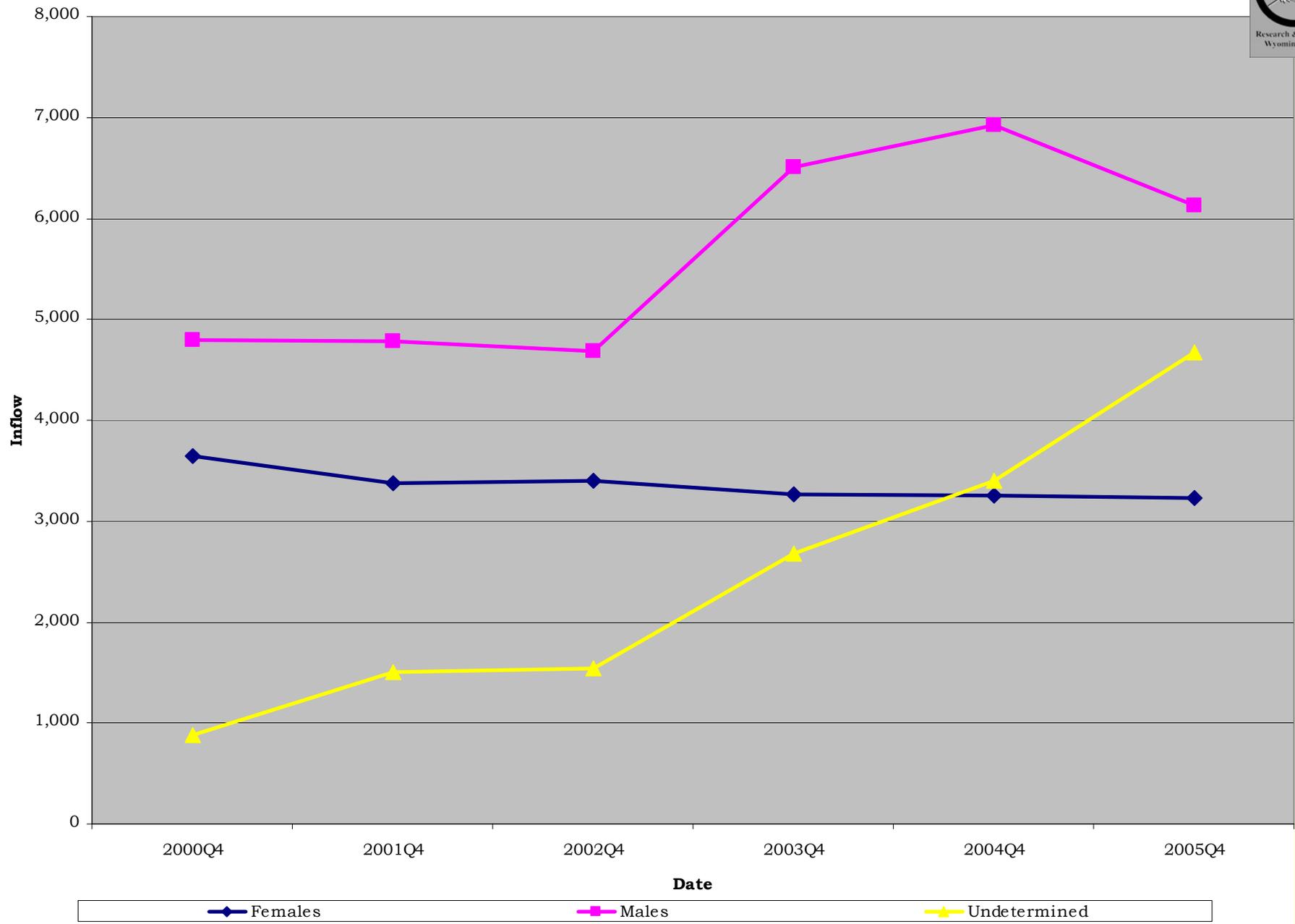
# Commuting Study Results

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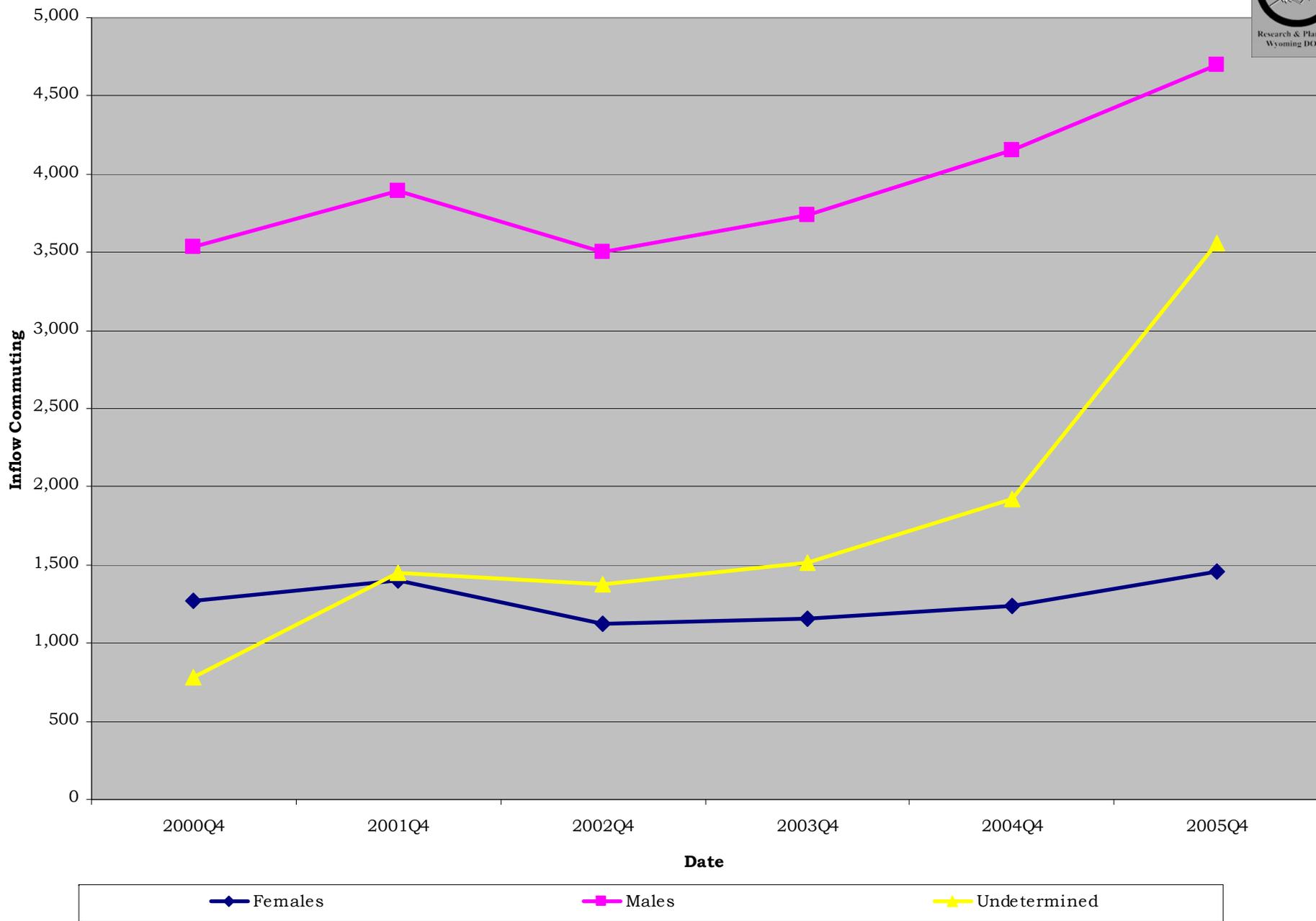


- Gross and net flows by county
- Flows by age group
- Flows by sex
- Wage differentials
- Imported labor

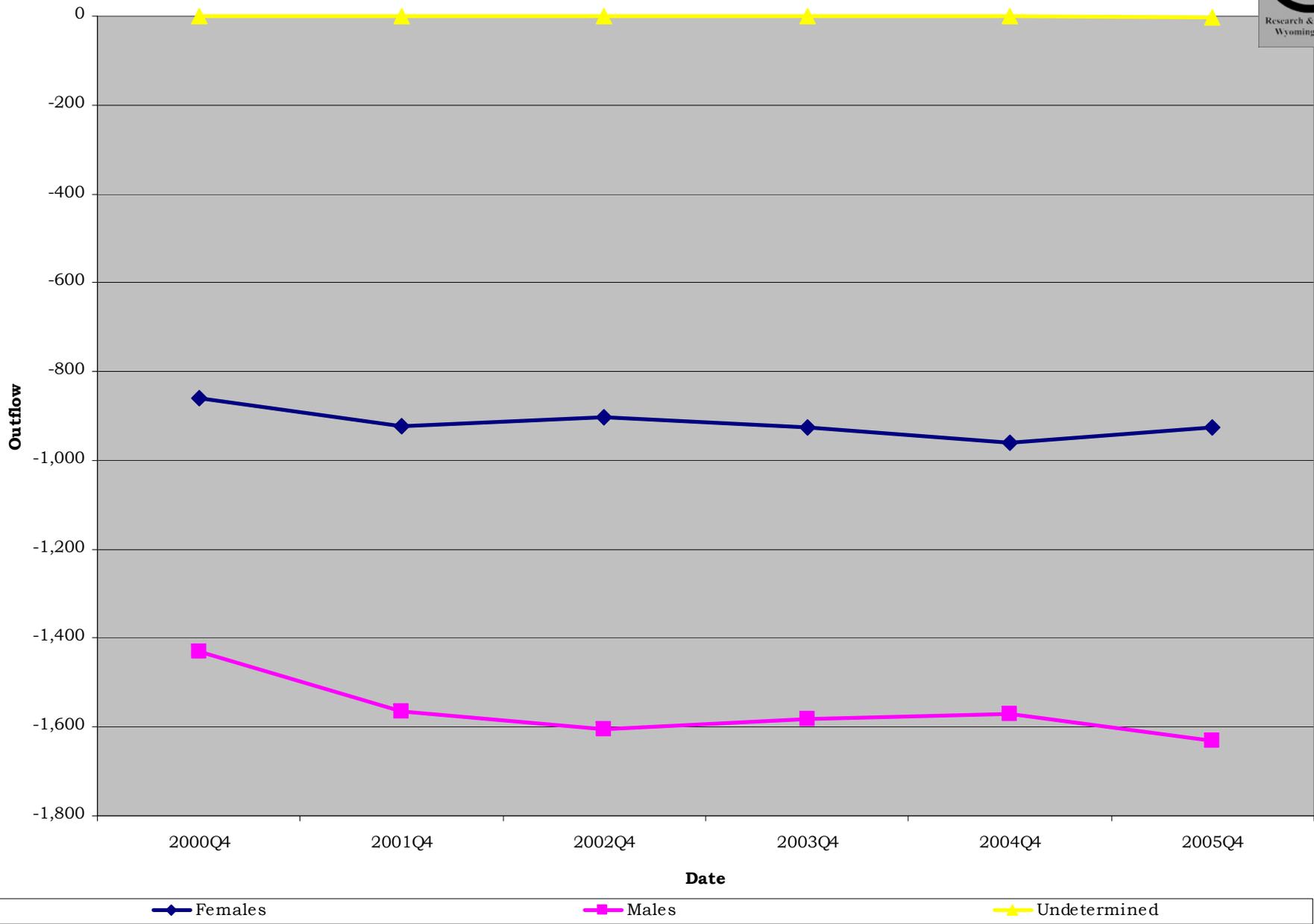
**Figure: Natrona County Commuting Inflows by Sex**



**Figure: Campbell County Inflow Commuting by Sex**



**Figure: Converse County Commuting Outflows by Sex**



# Commuting Study Results

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- Gross and net flows by county
- Flows by age group
- Flows by sex
- Wage differentials
- Imported labor

Figure: Average Wages for Campbell County Commuters, 2000Q1-2005Q4

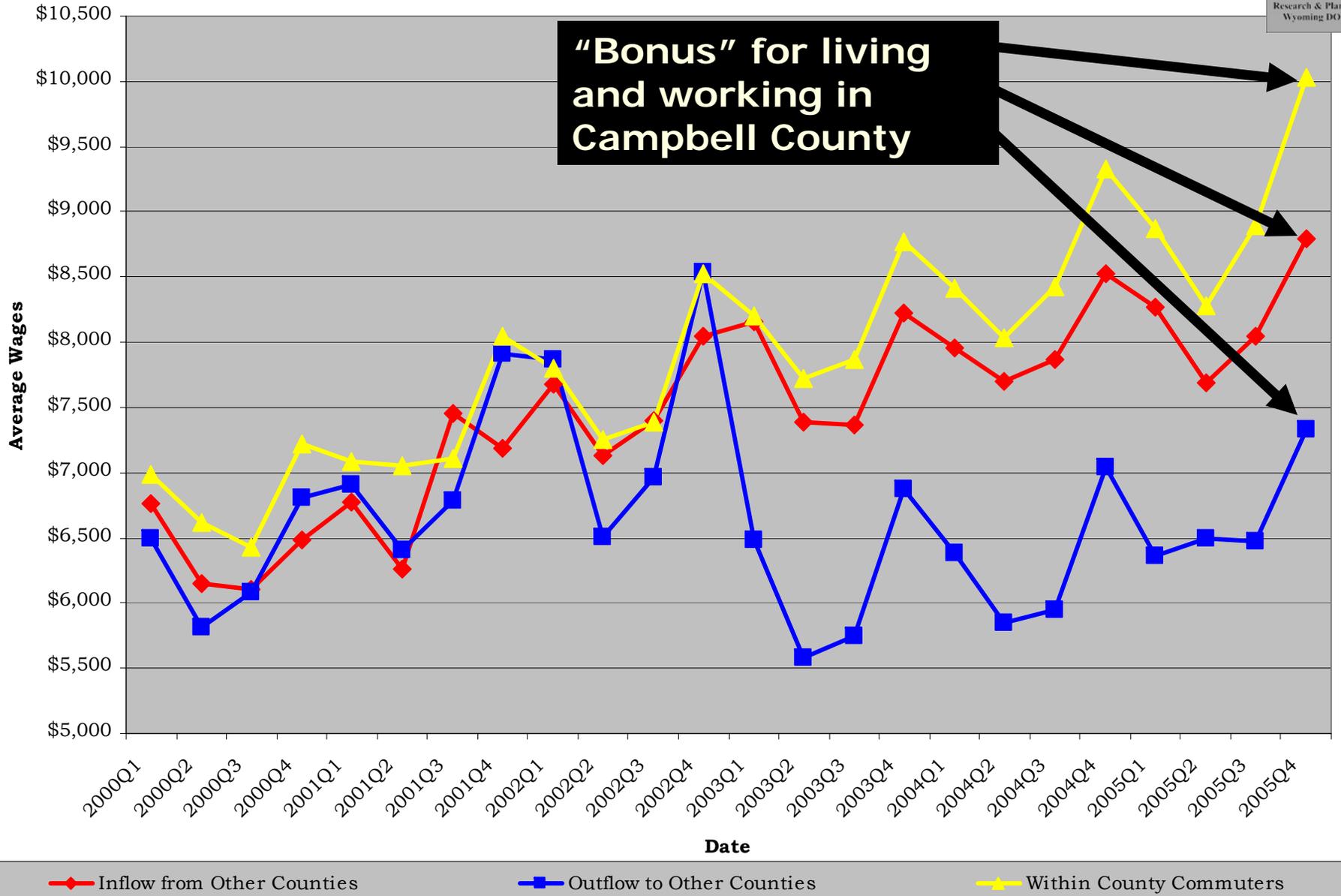
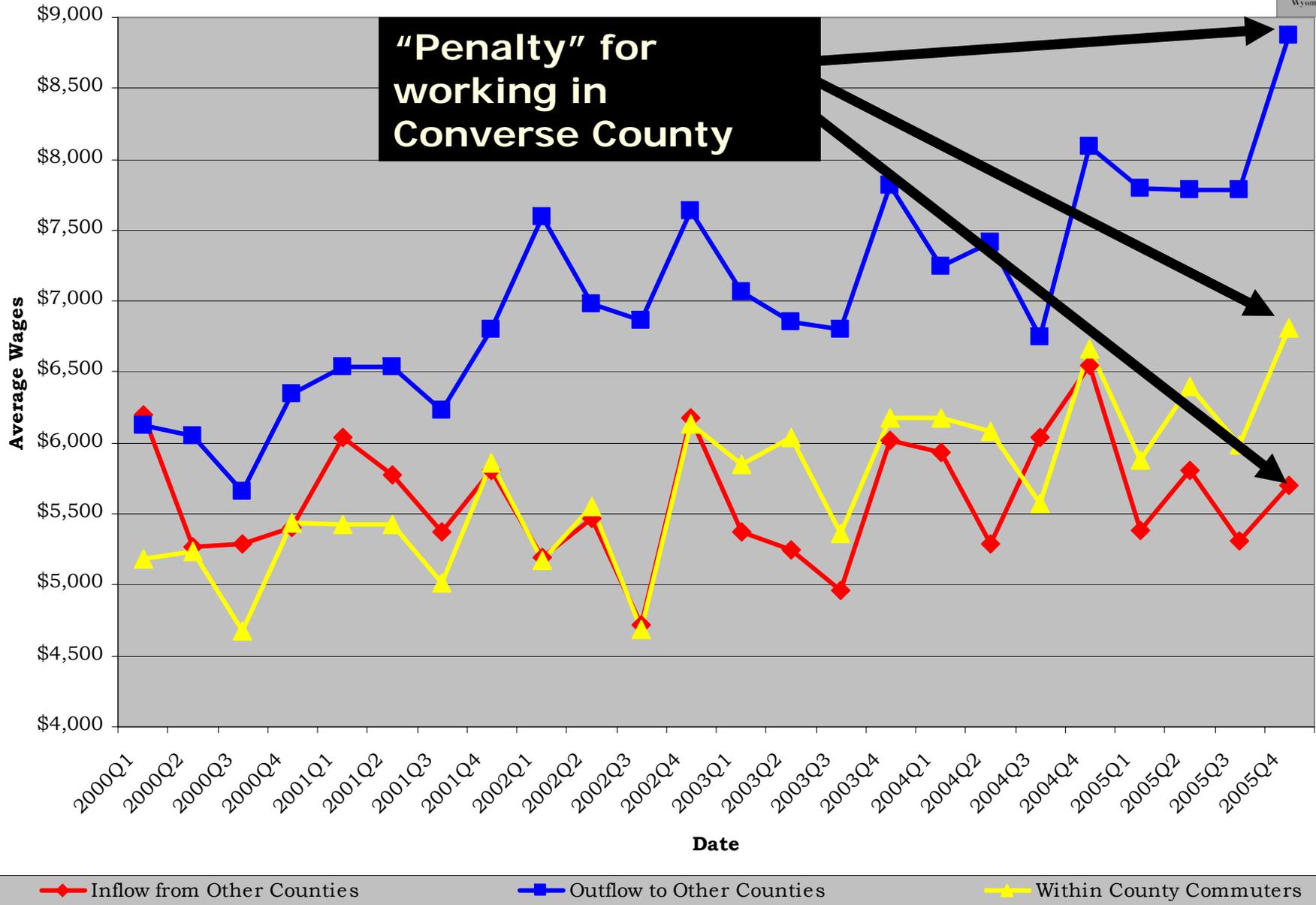


Figure: Average Wages for Converse County Commuters, 2000Q1-2005Q4



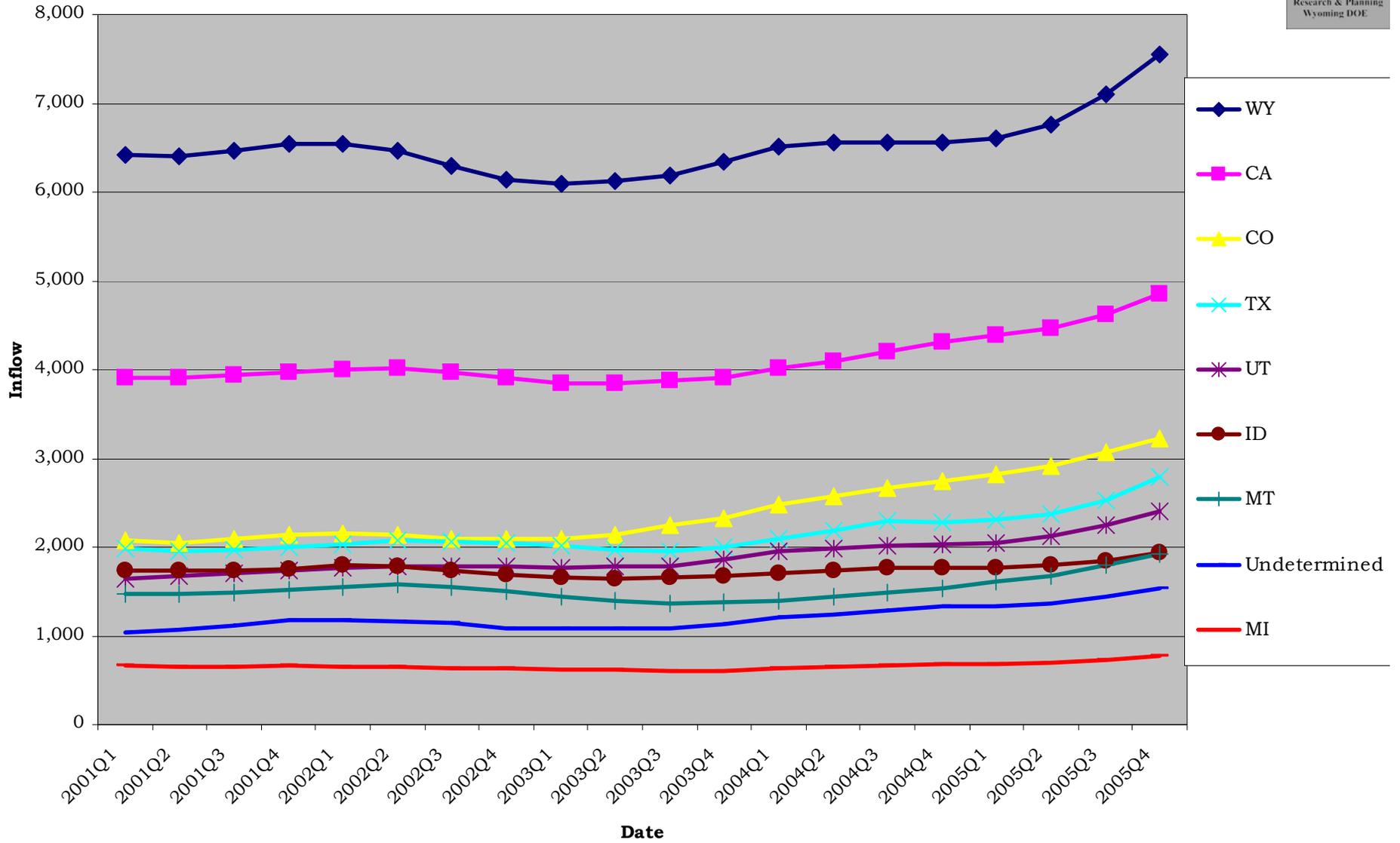
# Commuting Study Results

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- Gross and net flows by county
- Flows by age group
- Flows by sex
- Wage differentials
- Imported labor

**Figure: Top State of Origin Inflows to Wyoming for Workers without Wyoming Driver Licenses**



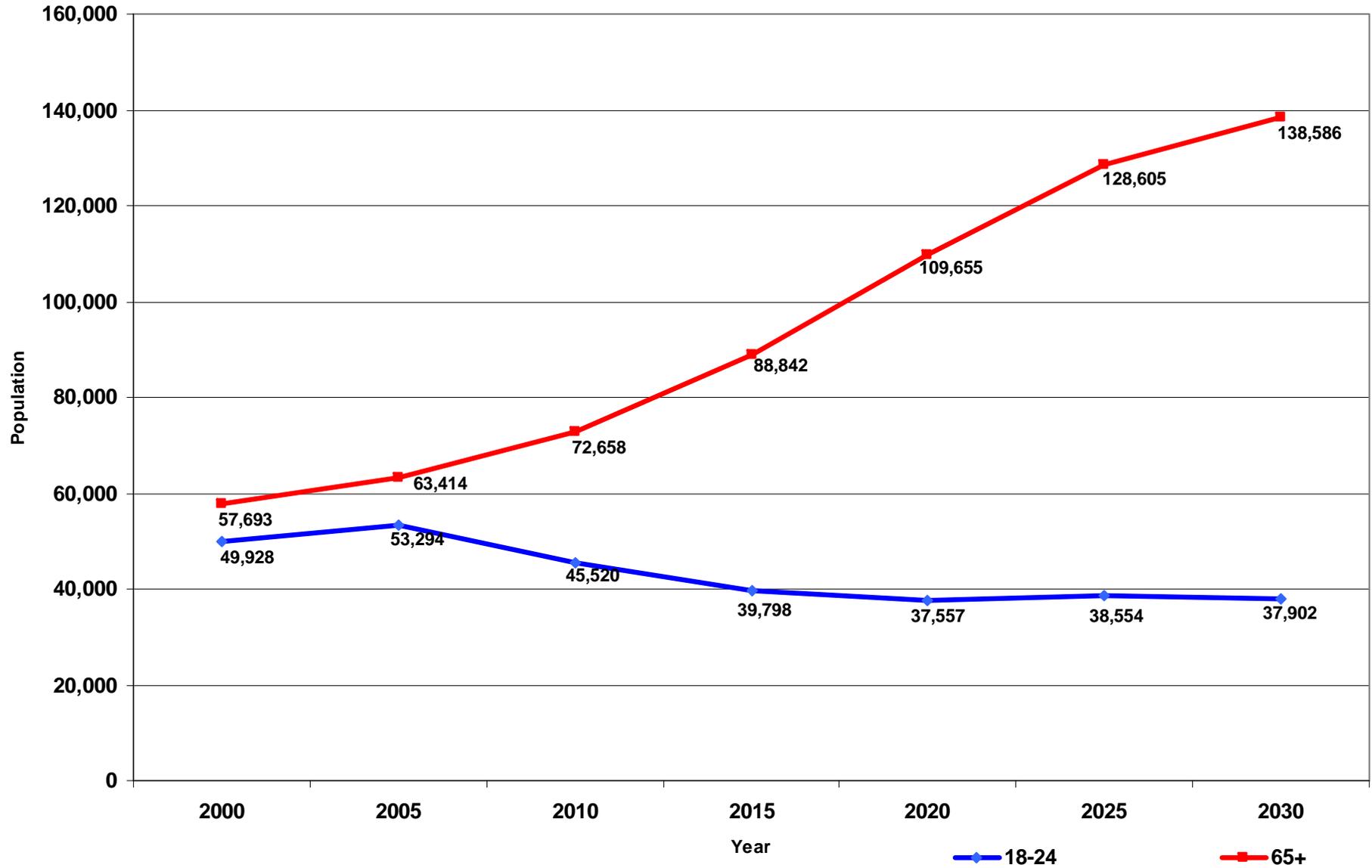
# Other Factors: The “Demographic Sledgehammer”

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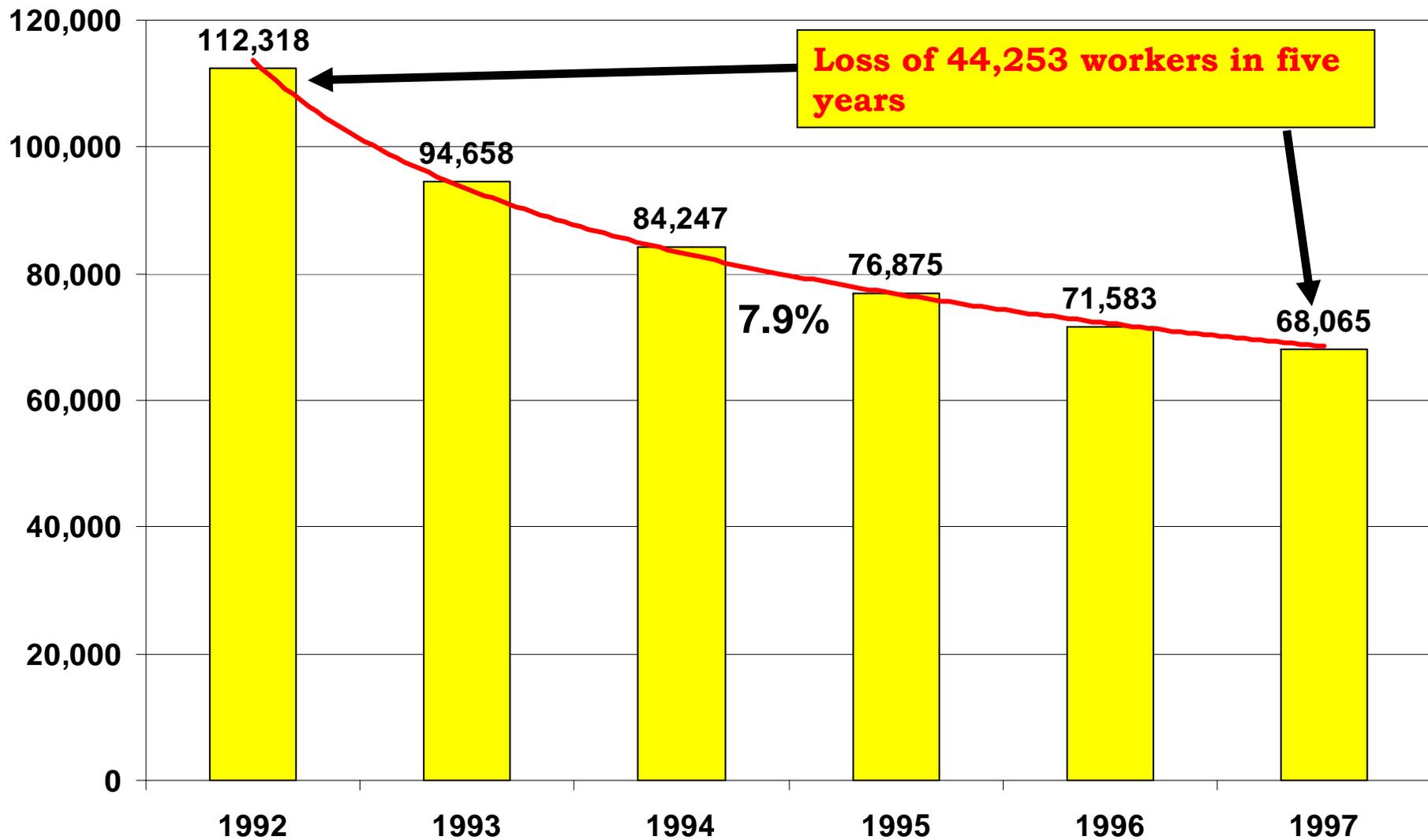
- Aging population
- Consumption patterns



**Figure: Projected Population Growth for Wyoming, 2000-2030**



## Number of 1992 Worker Cohort Age 16-34 Still Working in Wyoming



## Number of 2000 Worker Cohort Age 16-34 Still Working in Wyoming

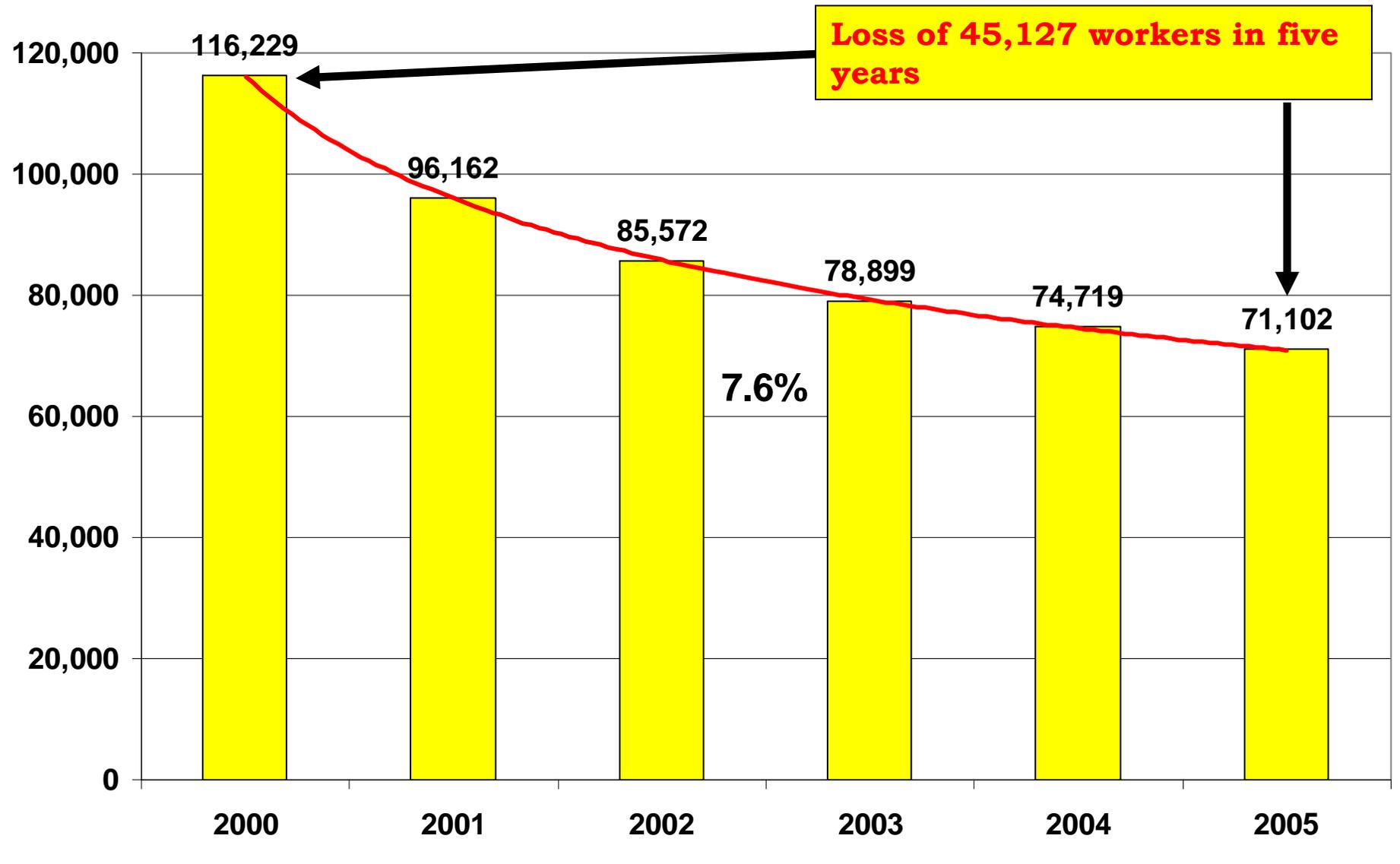
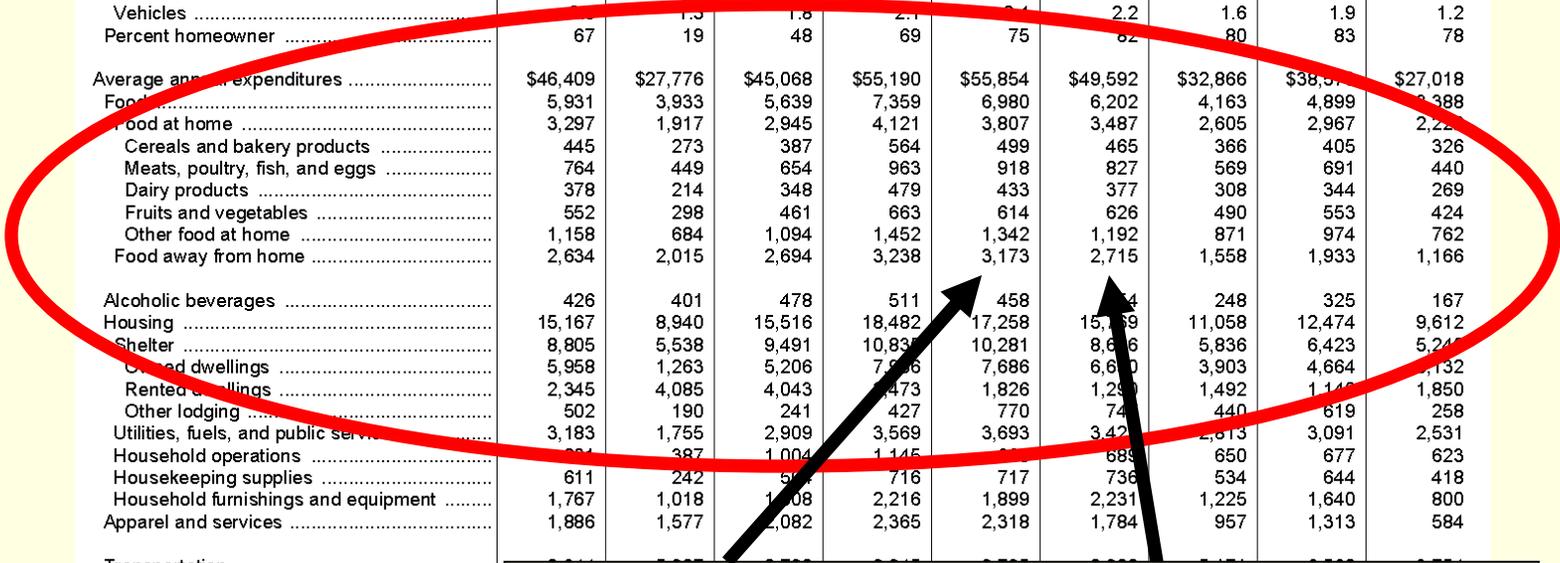


Table 4. Age of reference person: Average annual expenditures and characteristics, Consumer Expenditure Survey, 2005

Item	All consumer units	Under 25 years	25-34 years	35-44 years	45-54 years	55-64 years	65 years and older	65-74 years	75 years and older
Number of consumer units (in thousands) .....	117,356	8,543	19,635	23,835	24,393	18,104	22,847	11,505	11,342
Consumer unit characteristics:									
Income before taxes .....	\$58,712	\$27,494	\$55,066	\$72,699	\$75,266	\$64,156	\$36,936	\$45,202	\$28,552
Age of reference person .....	48.6	21.5	29.5	39.7	49.3	59.3	75.2	69.1	81.4
Average number in consumer unit:									
Persons .....	2.5	2.1	2.8	3.2	2.7	2.1	1.7	1.9	1.5
Children under 18 .....	.6	.5	1.1	1.3	.6	.2	.1	.1	( <sup>1</sup> )
Persons 65 and over .....	.3	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	.1	1.4	1.4	1.3
Earners .....	1.3	1.4	1.5	1.7	1.7	1.3	.5	.7	.2
Vehicles .....	1.3	1.3	1.8	2.1	2.1	2.2	1.6	1.9	1.2
Percent homeowner .....	67	19	48	69	75	82	80	83	78
Average annual expenditures									
Food .....	5,931	3,933	5,639	7,359	6,980	6,202	4,163	4,899	5,388
Food at home .....	3,297	1,917	2,945	4,121	3,807	3,487	2,605	2,967	2,222
Cereals and bakery products .....	445	273	387	564	499	465	366	405	326
Meats, poultry, fish, and eggs .....	764	449	654	963	918	827	569	691	440
Dairy products .....	378	214	348	479	433	377	308	344	269
Fruits and vegetables .....	552	298	461	663	614	626	490	553	424
Other food at home .....	1,158	684	1,094	1,452	1,342	1,192	871	974	762
Food away from home .....	2,634	2,015	2,694	3,238	3,173	2,715	1,558	1,933	1,166
Alcoholic beverages .....	426	401	478	511	458	444	248	325	167
Housing .....	15,167	8,940	15,516	18,482	17,258	15,159	11,058	12,474	9,612
Shelter .....	8,805	5,538	9,491	10,833	10,281	8,636	5,836	6,423	5,242
Owned dwellings .....	5,958	1,263	5,206	7,936	7,686	6,600	3,903	4,664	4,132
Rented dwellings .....	2,345	4,085	4,043	2,947	1,826	1,240	1,492	1,140	1,850
Other lodging .....	502	190	241	427	770	74	440	619	258
Utilities, fuels, and public services .....	3,183	1,755	2,909	3,569	3,693	3,423	2,813	3,091	2,531
Household operations .....	281	387	1,004	1,145	777	689	650	677	623
Housekeeping supplies .....	611	242	547	716	717	736	534	644	418
Household furnishings and equipment .....	1,767	1,018	1,508	2,216	1,899	2,231	1,225	1,640	800
Apparel and services .....	1,886	1,577	2,082	2,365	2,318	1,784	957	1,313	584
Transportation									
Vehicle purchases (net outlay) .....	1,663	393	1,080	1,735	2,076	1,960	1,889	1,925	1,852
Gasoline and motor oil .....									
Other vehicle expenses .....									
Public transportation .....									
Healthcare									
Entertainment									
Personal care products and services .....									
Reading .....									
Education									
Tobacco products and smoking supplies									
Miscellaneous									
Cash contributions .....	1,663	393	1,080	1,735	2,076	1,960	1,889	1,925	1,852
Personal insurance and pensions									
Life and other personal insurance .....	381	45	219	397	474	541	403	449	357
Pensions and Social Security .....	4,823	2,088	4,903	6,532	6,874	5,368	1,372	2,132	601



**Average annual away from home food consumption is 23.8% less for 55 - 64 year olds than for those 45 - 54 years of age**

<sup>1</sup> Value less than 0.05.

# Research Extensions



- Model likelihood of relocation
  - Lag between commuting and changes in school enrollments
  - Lag between commuting and changes in population
- Assist law enforcement in officer placements
- Connect commuting data to highway accident and Worker's Compensation data

# Conclusion



- Inadequate Monitoring
  - Leads to misdiagnosis of issues
  - Move beyond headlines to quantitative understanding
- Rapidly increasing commuting flows
  - Increased road deterioration
  - Increased motor vehicle accidents
  - Increased demands for first responder services
- Aging population
  - Need to “convert” out of state commuters and temporary workers to residents to maintain tax base
  - If older workers are not replaced, aggregate consumption will decline
  - Social welfare programs strained